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26 October 1978

TRANSLATIONS ON EASTERN EUROPE  
POLITICAL, SOCIOLOGICAL AND MILITARY AFFAIRS  
No. 1602

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INTERNATIONAL AFFAIRS

BRIEFS

CSSR STUDENTS IN USSR--In the academic year 1977-78 a total of 1,480 Czech and Slovak students studied at Soviet universities. [Prague MLADA FRONTA in Czech 16 Oct 78 p 3 AU]

GDR SHIP IN ROMANIAN PORT--Bucharest, 10 October, AGERPRES--"Volkerfreundschaft" motor ship of the German Democratic Republic laid anchor in the port of Constanta, on 10 October, having on board over 450 passengers, SUPF activists, veterans of the working-class movement of the German Democratic Republic, who are paying visits of friendship to several ports of socialist countries. The guests saw round cultural establishments in Constanta and the resorts on the Romanian Black Sea coast. A group of activists led by Horst Schumann, member of the CC of the SUPG, first secretary of the Leipzig Regional Committee of the SUPF, was received by Ion Dinu, secretary of the Constanta County Committee of the RCP, and by Gheorghe Trandafir, first secretary of the Municipal Party Committee, mayor of Constanta municipality. The motor ship left the port in the evening. [Text] [Bucharest AGERPRES in English 1947 GMT 10 Oct 78 AU]

DELEGATION TO CEMA CONFERENCE--A CSSR delegation led by A. Jakubik, minister of trade of the Czech Socialist Republic departed on 9 October for Budapest to attend a session of the CEMA countries' ministers of domestic trade. [Prague PRACE in Czech 10 Oct 78 p 3 AU]

CSO: 2400

**ALBANIA**

**BRIEFS**

PARTISAN BRIGADE ANNIVERSARY--A meeting was held at Arbane village, Tirana district, on 8 October to celebrate the 35th anniversary of the Third Assault Partisan Brigade. Attending were former partisans of this brigade, workers, cooperative peasants and students. Also attending were Simon Stefani, Politburo candidate member and first secretary of the Tirana district party committee, and others. Veli Llakaj, party Central Committee member, Deputy Minister of People's Defense and chief of the general staff, greeted the gathering on behalf of the party Central Committee, the Council of Ministers and the General Council of the Albanian Democratic Front. [Tirana Domestic Service in Albanian 1900 GMT 8 Oct 78 AU]

CSO: 2100

CZECHOSLOVAKIA

MINISTER CHNOUPEK: TOPICAL ISSUES OF CSSR FOREIGN POLICY

Prague NOVA MYSL in Czech/Slovak No 9, Aug 78 pp 6-24

[Article by Bohuslav Chnoupek, CSSR Minister of Foreign Affairs: "Topical Issues of Czechoslovak Foreign Policy"]

[Text] Pivotal, urgent issues, such as the struggle for peace and disarmament, for the freedom and independence of nations, for the progress of mankind, appear now on the agenda of international life. The principal motive power for their solution is the Soviet Union and other fraternal socialist countries, including Czechoslovakia. All the peaceful and progressive forces are ranged at their side. They constitute a truly powerful potential which decisively contributed--and still contributes--to that gratifying fact that the worldwide balance of power is increasingly more advancing toward peace, socialism and progress.

Furthermore, the events of the recent months have confirmed not only the viability of the process of detente and the expanding cooperation of states with different social systems, but also proved again the generally valid fact that detente represents the main trend in current international relations. The field of operation for the positive effects of the policy of detente is now being expanded in such a way that the greatest and most dangerous floes of the icy armor built around the countries of socialism over more than 20 years by the frosty efforts on the part of the architects and builders of the "cold war" have been literally crushed and swept away by the swift stream. Success has been achieved also in the removal of the remaining deposits of imperialist policy constructed by the ruling circles in the West as their morally political and material preparation for an armed conflict with socialism, as a policy of boobytrapping every path leading to rapprochement of nations and countries of the whole world, as a policy of constant tottering on the brink of a thermonuclear catastrophe.

Due to the new balance of power the opportunities for making peace a permanent issue without any alternative have been increased. Cornerstones have been laid for the construction of a magnificent building of hitherto unseen and, in fact, even unexpected, opportunities for the broadest and most advantageous cooperation among states. Logically enough in this

situation, more and more stimuli stem from the treasury of peaceful initiatives of the socialist countries, representing the most effective solutions to worldwide problems and a full normalization of international relations, and opening the way for the establishment of better relations among all countries, relations which proceed from principles of mutual respect and trust, friendship and good neighborliness.

The best example of such a creative approach to the solution of the fundamental issue of our days--the problem of the defense of peace and prevention of a new world war--are the comprehensive foreign policy programs of the 24th and 25th CPSU Congress which were quite rightfully also adopted as our own program. They contain the main directions in the struggle for a prompt and meticulous implementation in international relations of principles of peaceful coexistence, consolidation of international security, the development of cooperation among states, and the struggle for freedom and independence of nations.

In their peace efforts the Soviet Union and other socialist countries are strictly adhering to Lenin's pronouncement that what is necessary in the area of the struggle for peace is "... the least possible number of general statements, festive pledges, pompous formulations and as many as possible very simple, completely explicit decisions and provisions that really would lead to peace, not to mention to a complete removal of the threat of war."<sup>1</sup>

The fulfillment of Lenin's bequest of the policy of peaceful coexistence and the implementation of the principles of the Peace Program in the specifics of the daily foreign policy of the USSR and other socialist countries opened the way to detente and to a peaceful transformation of the whole system of international relations. Several years have passed since the period when this magnificent peace project--this general plan for a comprehensive progress toward a world without arms and wars--was approved; it is an insignificant period within the context of the outlined grandiose tasks of the struggle for peace as well as of a historical, temporal point of view. Nevertheless, its results speak for themselves.

This is most markedly evident in Europe, the epicenter of almost ceaseless disputes, conflicts and increasingly more terrible wars, where peace has now already begun its 34th year. That period corresponding to a whole one third of a century has already obliterated old trenches and bomb craters. When we encounter children on the streets of European cities, we happily realize that not only they but also their 30-year old fathers and mothers have never experienced the screeching air-raid sirens and the smell of gunpowder, and have never heard the explosion of bombs. For the public and for politicians this is certainly the most convincing, specific and vivid testimony of the viability of the peace policy which is being consistently and unswervingly implemented by the Soviet Union and the fraternal socialist countries, including Czechoslovakia.

Profound transformations and dynamic movements on the international arena reflecting the trends toward detente and increased security are first of all a result of the unity of action and the unity of objectives on the part of the socialist countries in the area of foreign policy. The CPSU and other fraternal communist and workers' parties primarily deserve credit for the fact that the principle of proletarian and socialist internationalism has been consistently applied as the leading principle in the process of ceaseless consolidation and improvement of the socialist countries' cooperation in foreign policy. This fact has been vividly reflected in CEMA which represents a significant factor for further consolidation of the national economics of individual socialist countries, as well as an economic base for the entire socialist community. The CEMA countries are now producing "... one third of the total industrial production of the world, thereby surpassing in their total volume the industrial production of the United States as well as that of Western Europe. That helps consolidate the material base from which proceeds the socialist countries' foreign policy, i.e., the policy of detente and cooperation."<sup>2</sup>

In the continuous amalgamation of the political unity and defense capability of the socialist countries the organization of the Warsaw Pact plays a significant role. This organization became a defensive shield against aggressive designs of imperialism, above all those of the North Atlantic Treaty Organization. On numerous occasions in serious international crises it acted as the decisive force that discouraged potential aggressors from carrying out their malevolent plans--from the counterrevolutionary events in 1956 in Hungary to Czechoslovakia in 1968. On the other hand, it is necessary to recognize the growing importance of yet another, equally relevant function of the Warsaw Pact, namely, its role in coordinating the foreign policy activities of the countries of the socialist community. This harmoniously functioning policy, too, is a policy of peace and of efforts to intensify detente. This has been evident in the meaningful initiative developed for the purpose of consolidating international security and cooperation and for military detente in Europe, which stemmed from the Bucharest meeting of the Warsaw Pact Political Advisory Committee in November 1976, as well as by other proposals aimed at the improvement of the situation, primarily of the untenable state of the hectic arms race, as formulated at the meetings of the committee of foreign ministers in Moscow in May 1977 and in Sofia in April 1978.

Czechoslovakia is taking an active part in joint actions of the fraternal socialist countries on all international issues, including the area of such key importance as detente.

Given that implementation of the policy of detente and cooperation of countries with different social systems represents one of the chief priorities of Czechoslovak foreign policy, Czechoslovakia cannot seek an effective way to fulfill that demanding task in some kind of a "vacuum," or in some

other isolated framework of an "individual" and therefore entirely narrow and fruitless approach. On the contrary, only in a joint and coordinated action with the Soviet Union and other socialist countries the whole system of initiatives for maintaining and further developing the hopeful process of detente may be realized--face to face with the mature capitalist states which are frequently acting in concert. Within the collective operations of the socialist countries the opportunities for the exploitation of specific traits of this or that country do not diminish in the least in a number of relations. In reciprocity--precisely in accordance with the law on correlation between the general and the specific--this positively affects the whole approach of the Warsaw Pact countries in their strife for detente.

Proceeding from the foreign policy platform of the 15th CPCZ Congress, Czechoslovak foreign policy has consistently and creatively promoted the policy of detente by foreign policy actions that are carefully articulated and harmonized with the Soviet Union and other socialist countries. This fact was quite unambiguously commended in the report by the presidium of the CPCZ Central Committee at the 11th session of the party's Central Committee: "In a close coordination with the countries of the socialist community our republic has actively helped to further strengthen the impact of socialism on world events. As a sovereign socialist state Czechoslovakia now holds a solid international position and together with the Soviet Union and its fraternal socialist countries it is participating in the struggle to reduce international tensions and strengthen the peace."<sup>3</sup>

In the development of cooperation and consolidation of the unity of countries within the socialist community the meetings of their party and state representatives play a meaningful role; they have already been accepted as a useful norm for relations among the fraternal socialist countries. It may be mentioned that at present they are an irreplaceable, most valuable aspect in the area of coordination of foreign policy.

This was best documented by the visit of the Soviet party and governmental delegation led by Secretary General of the CPSU Central Committee and Chairman of the Supreme Soviet of the USSR, L. I. Brezhnev, which lasted from 30 May through 2 June 1978. We again realized that socialist Czechoslovakia's over-all development, its place and authority in the world are indivisibly linked with the consolidation and intensification of our friendship and cooperation with the Soviet Union, our most loyal friend and most reliable ally, the guarantee of the independence and security of our state, of peaceful construction and of our socialist system.

"The visit by the delegation of the party and government of the Union of Soviet Socialist Republics is another significant expression of the continuously strengthening relations of unbreakable friendship and all-around cooperation between our parties and between the nations of both countries,"

said Comrade Husak at the festive meeting held at the Prague Castle in honor of the delegation of the party and government of the USSR. "Thirty years of the building of socialism in our homeland has demonstrated convincingly that the systematic intensification of our mutual relations fully corresponds with the most essential interests of our nations and with the unity of the socialist community, and that it benefits socialism, progress and peace in the world."<sup>4</sup>

Only an avowed anticommunist or one who a priori rejects facts might deny that Czechoslovakia's international position and its superior authority in the world today are stronger than ever before. To be sure, this fact which is then naturally reflected in our more advantageous possibilities to appropriately affect the process of detente would never have occurred if it were not for Czechoslovakia's close cooperation with the mighty Soviet Union. After a passage of time, as a matter of fact, it is more clearly evident that only a country with a solid political hinterland may exert a positive peacemaking influence on its neighbors as well as on other countries, and conversely, a country with a vacillating leadership and internal instability cannot establish any stable and trustworthy foreign policy. Moreover, countries with an internal chaos leading to the very brink of civil war may very negatively disturb the international situation even beyond their borders. Therefore, the quelling of the crisis in Czechoslovakia in 1968-1969 which was achieved with the aid of the Soviet Union and other fraternal socialist countries is quite legitimately regarded not only as an important act in the defense of socialism but also as a decisive step in the interest of detente. "It helped protect our country from a counterrevolutionary reversal and from its tragic consequences for the working people's life. Moreover, it was very relevant for the stability of the situation and preservation of peace in Europe."<sup>5</sup> Comrade Husak spoke the above words from the platform at the festive assembly in the Prague Castle, fully expressing that most momentous circumstance. If ten years ago the counterrevolution would have gained a free vent in Czechoslovakia and if the fraternal socialist countries had not come to the aid of our workers' class on the basis of the Bratislava Declaration, then the consequences for the internal political development liquidating the basic values of socialism would necessarily have been reflected also in international developments as well. The counterrevolutionary ferment in our country would have incited the focus of serious political tensions over the entire area of Central Europe. International relations would obviously then have followed a different direction than that of detente. The development of bilateral relations between states with different social systems would have been frozen. Even multilateral relations, including the convocation of the Helsinki Conference on Security and Cooperation, would have been wrecked.

It may be said with certainty that if imperialism had not learned a hard lesson for its attempts to snatch away our country from the alliance and unity of socialist countries in 1968, its aggressive tendencies would have

increased. Also, it may be assumed that in such a situation the West as a whole could not be forced to accept the policy of detente. Its militarist circles in particular would have felt encouraged because in their plans against socialism the corridor between the Krusne Hory and the Sumava Mountains is still regarded as an important geo-strategic area.

The class enemies in our country have not succeeded; they did not hold a winning card while trying to push Czechoslovakia back into an international isolation, nor have they succeeded with the application of the ignominious bourgeois and antisocialist concept of the "defense of human rights" which in our country appeared in the form of the so called Chapter 77. During his visit in Prague this year Comrade Leonid Brezhnev declared: "When our Czechoslovak comrades are now looking back, they may say with satisfaction that they have proved their mettle in difficult tests honorably." Such an acknowledgement certainly means a great recognition of the inspiring and leading activity of our CPCZ, of its Central Committee; it is an expression of the respect of the Soviet people for the great, tenacious work of the workers' class, farmers and the working intelligentsia of our country. We deeply appreciate Comrade Brezhnev's expression of high esteem for the place and role of the CSSR in the world: "The Czechoslovak Socialist Republic, a recognized member of the fraternal family of socialist states, plays an important role in international life, vigorously and fruitfully participating in the solution of current international problems and in the consolidation of peace in Europe and all over the world."<sup>6</sup>

We are gratified that in the Joint Statement on the Further Development of Fraternal Friendship and Comprehensive Cooperation between the CPCZ and CPSU and the CSSR and USSR, the Soviet delegation highly appreciated the stimulating role of the CSSR in international relations and the contributing of the CPCZ, its Central Committee, the presidium of the Central Committee and the general secretary of the CPCZ Central Committee and president of the CSSR, Comrade Husak, to the coordinated, peaceful foreign policy of socialist countries.

The fruits of the foreign policy coordinated between Czechoslovakia and the Soviet Union, as well as between all fraternal socialist countries, have finally matured and became a reality of historical importance in the struggle for detente. A special credit for the improvement of the situation in Europe--and thus, of detente--is due to the Helsinki Conference convoked upon the instigation of European socialist countries. A poet said that great things may be best viewed from a distance. These very fitting words apply exactly also to the assessment of the contribution made by the Helsinki Conference which quite certainly was a "great thing" in the overall process of specific steps in the area of detente. Today already it has affected every state on the European continent, large and small, socialist and capitalist, whether belonging to a military-political

alliance or noncommitted. With the passage of time its results are certain to acquire even more significance. Therefore, Czechoslovakia has supported most distinctly and vigorously the demand stressed by the socialist countries, namely, that every principle and decision of the Final Act of that conference be implemented to the fullest extent and that this be done by every state that has signed it.

In fact, this really unprecedented event is increasingly more favorably affecting the relations among its participants. It is no coincidence that it has been described as an excellent school of international policy. Only now, after an interval of 3 years, it has become quite clearly evident that political negotiations of states with different social systems are taking place in a new atmosphere as well as under different circumstances. While the development of political cooperation once used to proceed rather haphazardly, mostly in the cases threatened by some grave political crisis or even endangered by war, now that process occurs in a calm atmosphere, under conditions of diplomatic negotiations, with practically no immediate military threat on the part of a third country.

The Final Act of the Helsinki Conference became a galvanizing factor in the revival of diplomatic activity in the broadest extent of its spectrum. There appeared new forms of political cooperation of states with different social systems. Nobody can doubt anymore that regular consultations of leading representatives of the socialist countries with leading representatives of the capitalist states play an important part in the process of detente. Documents concerning the implementation of such regular political consultation which have been already signed and which are still being signed created a solid base for the development of political contacts. It is more than typical for the period since Helsinki that regular political consultations have become practically the most meaningful and also the most reliable mechanism of international political relations. Let us also note that important and interesting fact that many agreements concluded precisely in the course of bilateral negotiations and consultations embody the principles of the Helsinki Conference and provide the norms for peaceful coexistence.

It may be said that the Final Act stamped the entire sphere of bilateral relations with its seal of an immediate as well as long-term impact. There is no politician, diplomat or propagandist today who could openly reject or reasonably discredit the expediency of bilateral relations and political contacts. The public as well as the responsible politicians have already become accustomed to the fact that in the current situation more and better solutions may be reached by means of regular dialog between two states and by their "keeping constantly in touch" than, for instance, in a situation where diplomatic channels are closed, where instead of a direct contact and a study of the situation directly on the spot the negotiators sit within the confines of their offices, where instead of realistic clarifications there are mere assumptions, and where a dispute or conflict takes

precedence over a settlement. "Diplomacy of bilateral relations" is a truly demanding issue that requires the creation of new forms corresponding to new contents--enforcement of general principles of peaceful coexistence in daily practice.

The degree of efficacy of bilateral relations between states with different social systems may be well measured by some kind of quantitative and qualitative evaluation. By comparing two relations it may be said and on the basis of facts determined that one of them is better (or more advantageous) than the other, but it cannot be said that one is twice or three times as good as the other. After all, it is not possible to count the "amount" of political significance and peacemaking potential inherent in the essence of the development of bilateral relations. As a matter of fact, not only bilateral issues but also the burning problems of international policy may be determined in the course of bilateral negotiations and consultations in a greater detail than anywhere else. Only in a dialog for which bilateral negotiations create literally an ideal framework mutual attitudes may be understood and the arising contradictions solved in a constructive spirit, or prevented in time.

From such relevant axioms it follows that bilateral relations must be given as much attention as possible and that it is necessary to take care that good relations be developed even further and satisfactorily raised to a higher level by means of all available factors, and that those relations which are pussyfooting around in one spot be intensively revitalized. That benefits the further progress of the policy of detente and serves the interest of all nations.

Experience has shown that there are such examples of the development of bilateral relations that may be called truly pioneering. Those are examples of originality in international relations on a higher level; those are the innovations introduced by those who are the trailblazers in the policy of detente. Such innovations are typical for foreign policy and diplomacy of the Soviet Union whose enormous initiative and creative approach succeeded in the conditions of the second half of the 1960's in initiating and developing bilateral relations with France, in the 1970's with the German Federal Republic and finally also with the USA. The appearance of a new aspect in international relations may be determined by various motives. In this case, it is the Leninist concept of the policy of peaceful coexistence applied in conditions when the mutual relations of the class forces are undergoing fundamental changes and when even the capitalist states are forced to deal with the socialist countries from the the positions of peaceful coexistence. However multiform the symptoms of innovation in bilateral relations may be, the basic, principal and constructive fact is that due to the Soviet Union, a new, peacemaking stimulus appeared in international life.

Our country, too, is vigorously promoting bilateral relations and the intensification of mutually advantageous cooperation with states with different social systems. Without succumbing to unwholesome self-satisfaction, the fact is that our record is excellent even in that area of international life.

Because of the consistent implementation of the platform of the Congress and the coordinated unity of our foreign policy with the foreign policies of the USSR and other socialist countries we were able to use the process of detente--and at the same time, to enrich it--so as to intensify the existing mutually advantageous cooperation with Finland, France, Belgium, Great Britain and even with Denmark, Norway, Italy, Turkey, Greece as well as with Portugal and Spain; in other words, even with such states with which our mutual relations were either at a low point or nonexistent.

A special niche in the development of Czechoslovakia's bilateral relations rightfully belongs to the fact that its relations with the German Federal Republic are returning to normal tracks. The official visit by the general secretary of the CPCZ Central Committee and the president of the CSSR, Gustav Husak, in the FRG this year in April was an event of considerable importance that drew special attention of the broad public not only in Czechoslovakia and FRG but also in other European countries. The interest of the public and of political and economic circles is understandable. After all, the relations in this historical and yet so sorely tried part of the European continent where the nations of both countries live--next to other nations--serve as a sort of an indicator sensitively registering relations all over Europe. Not only they reflect the whole development but, as demonstrated on several occasions in the past, they also affect it with a particularly extensive and consequential impact. At the same time, their improvement is a good omen as well as a particularly relevant positive factor.

The results of Comrade Husak's negotiations with the representatives of the FRG manifested common determination of both neighboring countries--one of them socialist and the other capitalist--to cooperate more intensively in political, economic and cultural areas. At the same time, unlike in their recent past, both countries no longer have to start from nothing, from the proverbial "zero" point, but have at their disposal a meaningful document, the Agreement on Mutual Relations Between the CSSR and the FRG, concluded in 1973. That was the first--and it should be emphasized--also the decisive step toward normalization and development of relations and toward the settlement of existing problems that had been disturbing their relations for several decades. The signing of the Joint Declaration at the occasion of the above-mentioned top-level visit may be regarded as a step which meant a real movement in the direction toward the development of mutual relations in the interest of good-neighbor policy as well as to the benefit of peaceful coexistence in Europe. The document which reflects the current situation of the relations between the CSSR and the FRG

expressed the positions of both states on basic political problems and outlined further specific way for the development of mutual relations of both neighboring countries--from the completion of the building of a political infrastructure through the cooperation in economic, cultural and other areas, up to additional arrangements of relations by means of legal agreements. The supporting structure for the Joint Declaration is most certainly the bilateral political determination to intensify the Czechoslovak-West German cooperation constructively, in the spirit of the principles of peaceful coexistence of states with different social systems, and thus, to help consolidate and intensify the policy of detente.

The document strongly emphasized the importance of regular exchanges of views on the development of cooperation and mutual understanding, where an irreplaceable role is played by meetings of the leading political representatives of both countries. From the progress of the negotiations themselves as well as from the Joint Declaration it follows that the CSSR and the FRG intend to carry on on various levels the intensification of the political dialogue and consultations on bilateral and international issues of mutual interest. For instance, it is expected that an exchange of views by the ministers of foreign affairs will be held at least once a year either in Prague or in Bonn. Similarly, contacts of other members of both governments are regarded as a useful means for the exchange of views on the development of cooperation of both countries in numerous different areas.

The negotiations of the highest political representatives of the CSSR and the FRG have provided meaningful impulses also for the development of contacts at the level of parliaments, cities, trade unions as well as among youth organizations and other organizations and institutions. Therefore, it is necessary to expand a realistic political dialog in every area, to proceed on various levels with mutual exchanges of views and consultations and thus to extend and intensify between the CSSR and the FRG also the useful practice which Czechoslovakia has been successfully implementing for several years already in its relations with several states with a different social system.

The talks in Bonn confirmed the fact that opportunities have been opened also for a more intensive economic cooperation. As a matter of fact, we must bear in mind that although the FRG ranks as the first among our trade partners from the capitalist countries, it is evident that even here the potential for the development of relations is far from exhausted. Therefore, the negotiations dealt with the current situation and with the outlook for a long-term economic cooperation, primarily in the area of cooperation of enterprises, mechanical engineering, metallurgy, power engineering and production of power, electrical engineering and electronics.

Furthermore, the cultural exchanges which will be revitalized will serve to enrich the life of the people in both countries by experience and artistic treasures which not only are among the most precious in the cultures of both countries but which often represent cultural pinnacles of Europe and of the world. The mutually advantageous cooperation in this area will be activated on the basis of the newly concluded agreement on cultural co-operation between both countries, signed by their ministers of foreign affairs during said visit. It is no exaggeration if we characterize that document on cultural cooperation also as a contribution to the continuous improvement of the Czechoslovak-West German relations, to detente and to the efforts to implement the Helsinki Final Act to the fullest. Naturally, this does not change anything on the fact that the ideological conflicts stemming from the different social systems of the CSSR and the FRG will continue.

Next to issues of bilateral character, problems connected with an overall assessment of the international situation, detente, disarmament as well as security and cooperation in Europe also appeared on the agenda of the talks of the highest representatives of both countries. We may note with satisfaction that both parties confirmed the basic truth of the present, namely, that there is no sensible alternative to the policy of detente. In that spirit the representatives of the CSSR and the FRG agreed that on the basis of the Final Act of the Helsinki Conference the process of detente and cooperation between states must be further fostered and translated into life consistently and comprehensively. Moreover, during the talks an agreement was reached on the view that the political aspects of detente must be expanded by military aspects. In that context, the conclusion followed from the discussions that all states must intensify their efforts to reduce the arms race and take effective steps to limit armament so as to achieve universal and total disarmament under an efficient international control. Both countries are directly participating also in the Vienna talks on reduction of armed forces and arms in Central Europe and naturally they also dealt with those problems. Although they belong to opposing military-political configurations--and therefore, they are advocating different methods of procedures in said negotiations on disarmament--they have found a common language to express the position that their talks must unavoidably produce constructive and universally acceptable results.

Czechoslovakia meets the German Federal Republic on yet another important international platform, namely, in the United Nations Security Council. This meaningful fact also became a topic of interest in the talks of our and West German representatives. Consequently, in their Joint Declaration both parties expressed their readiness to cooperate constructively and objectively in the Security Council and in other U.N. organs in support of peace and security on the basis of the U.N. Charter.

Comrade Husak's visit in the FRG may be assessed on the whole as a political event of the foremost importance with results which have very positively affected the life of the nations in both countries as well as nations in Europe as a whole. As a matter of fact, the negotiations led by G. Husak and other Czechoslovak representatives with the functionaries of the FRG government as well as with the leading personalities of other political, economic and public organizations of that country demonstrated their mutual interest in the continuation of the process of detente, in the preservation of peace, in peaceful coexistence and cooperation of states with different social systems. This basic moment is simultaneously a very promising springboard for the further improvement and intensification of relations between the CSSR and the FRG, for an active search for new ways, for the establishment of truly good neighborly relations between both countries, for a better mutual understanding, and for a mutually advantageous cooperation.

The relations with another of our capitalist neighbors, Austria, have also developed favorably. They were significantly enhanced last year in November by the visit of the premier of the CSSR, L. Strougal, In Vienna--by the way, it was the first visit by a Czechoslovak premier in that country since 1918. Thus, normalization of political relations of both our countries was decisively consolidated and firm foundations were laid for their further upgrading. This helped simultaneously to activate relations in several areas--beginning with the foreign trade and ending with the scientific-technological cooperation.

The significant documents signed during the visit of the premier of the CSSR in Vienna by the ministers of foreign affairs of both countries also expressed a positive trend in that direction. At issue were the agreement on the establishment of highway checkpoints on our common state borders and the agreement on cultural cooperation. Interesting opportunities are currently taking shape in the area of trade policy, particularly in the form of cooperation in the production in the fields of mechanical engineering, transportation, power engineering and in establishing closer contacts for the purpose of cooperation by appropriate Czechoslovak and Austrian enterprises. These issues as well as the development of cooperation between the two neighboring countries in the field of culture, sports, tourism and others, are creating suitable political preconditions for a further expansion of mutual bilateral relations and thus also for an improvement in the whole atmosphere of our continent.

Another specific contribution toward the development of Czechoslovak-Austrian relations was the visit by the minister of foreign affairs of the CSSR in Austria this year in May. The favorable atmosphere of the negotiations as well as the level of his reception (most of all, by President Kirchschlaeger) were a testimony about the fruits of the policy of detente in general and of the interest on the part of Austria in continuous good relations with the CSSR in particular.

From all these recent talks of the Czechoslovak and Austrian representatives it follows that today already political contacts on the high and highest levels are of an irreplaceable value for the expansion of mutual bilateral relations as well as for mutual clarification of the standpoints to fundamental international issues. In that respect we attribute considerable importance also to the forthcoming visit of the Austrian President Kirchschlaeger in the CSSR.

As concerns our relations with the United States, no positive changes occurred there in the recent period to indicate any intention on the part of the United States to lead them out of the blind alley where they got through the fault of the United States. The United States continues to refuse to sign the already initialed agreement on property rights, to surrender the Czechoslovak currency gold held without any authorization, those symbolic 18 tons, of which 11 tons are in the form of coins and about 8-9 [sic] tons in ingots stored in the banks in the West; it continues its economic discrimination against our country. This policy reflects a discrepancy between words and deeds and cannot contribute toward a revitalization of the Czechoslovak-US relations.

In the spirit of the platform on foreign policy set by the 15th CPCZ Congress, the Czechoslovak foreign policy is vigorously involved in relations with the developing states in Africa, Asia and Latin America. Czechoslovakia is maintaining and developing contacts based on principles of equality, mutual respect and non-intervention in internal affairs, and of mutually advantageous cooperation with an overwhelming majority of those countries. It is cooperating with them also in the area of economy on principles of mutual advantage and thus it helps them overcome the negative consequences of their backwardness caused by colonialism. On every platform of negotiations it promotes a more just international economic arrangement, which is also in the interest in an improvement of the situation of developing countries.

Czechoslovakia has demonstrated its solidarity with the legitimate struggle of numerous developing countries and national liberation movements against imperialism, neocolonialism, racism and apartheid. At every opportunity it has supported such solutions of the current centers of tension--beginning with the Middle East and ending with the south of Africa--that are in the interest of a peaceful settlement and serve the cause of social progress. This attitude is based on principles and has gained Czechoslovakia sympathies in other countries, including the capitalist states.

At the same time we are realists, aware of the fact that the process of detente is not a smooth road. For that reason we have never expected that the Helsinki Conference and the great opening of a new era of expanding bilateral relations would instantly resolve everything. Thus, certain fluctuations became evident even after the Helsinki Conference, which fact

does not bear witness to the best intentions of certain circles in the West to proceed in the spirit of the Final Act and in the sense of its letter.

Specifically, this type of a sinusoid in the political development became evident at the Belgrade conference in the form of attempts by certain Western delegations to torpedo the solid system established in Helsinki. The reality of detente helps us to further discover and learn it as well as to modify it positively. However, it is not here at the disposal of countries to take from it whatever suits only themselves, to restrict and falsify it, and thereby also de facto reject it. Some states in the West, primarily the United States, attempted to falsify detente in precisely such a way and to reduce it to issues connected with the so-called defense of human rights which allegedly are not being observed in the socialist countries. It is known that at the Belgrade conference some delegations from the West tried to use precisely this false argument as a ramrod against the socialist countries. This attempt on the part of the West to distort detente, to misuse unilaterally the Final Act and thus to create a base for legal interference with the internal affairs of the socialist countries failed.

In the complex situation of the Belgrade conference the delegations of the socialist countries, including Czechoslovakia, opposed such antisocialist attacks. They did not let themselves be dragged into endless polemics; they did everything in their power to achieve constructive results at that international meeting but not, naturally, at the price of concessions on fundamental issues. As always, the delegations from the socialist countries proceeded in a coordinated, purposeful manner and in friendly unity. If the Belgrade conference proved effective--and we know that from the point of view of its total balance it was effective--then most of the credit is due to the socialist countries.

It was primarily the Soviet Union, Czechoslovakia and other socialist countries which carried with assurance the standard of security and peaceful cooperation for all of Europe. They presented additional meaningful stimuli for an intensification of detente to the participants of the Belgrade conference and thus also to the broad European public: 1. to expand political detente by military detente, and to reduce the risk of a military confrontation in Europe and the danger of an eruption of a nuclear war; 2. to extend and activate the all-European cooperation in the matters of environmental protection, development of power and transportation, in establishing conditions necessary to safeguard personal safety of representatives or citizens of one state on the territory of another state, and several other proposals. All those main topicals remain on the daily agenda in Europe, despite efforts by the reactionary forces to discredit them and to block their adoption.

In conclusion to the discussion of this problem it may be noted that the Belgrade conference confirmed the continuity of the process of international cooperation inaugurated at the summit in Helsinki in 1975. The Final Act of the Helsinki Conference successfully withstood all attempts in Belgrade to dismantle it and came out of that conference unshaken.

In view of the fact that the results of the Belgrade conference, including the adopted final document, correspond with the interests and objectives presented to the meeting in Belgrade by the socialist states, that the attacks by the opponents of the process of detente had been repulsed, that the attempts of the West to enforce its concept of human rights and humanitarian issues had been successfully defeated, that the Final Act was protected from all attempts to revise and change its contents and purport, and that the attempts to legalize interference in the internal affairs of the socialist states had been repelled, we assessed the results of the Belgrade conference on the whole as positive.

In the era of detente, dialog, that reliable tool in the development of bilateral and multilateral contacts, has found an especially great--and it should be emphasized, completely irreplaceable--place also in the solution of another most relevant issue, namely, disarmament. Although nations have not gained sufficient experience with disarmament because only about twenty agreements and treaties have been concluded so far and not such which would ban the most dangerous weapons), nevertheless, it may be said that they are gaining increasingly better experience in that activity through their continuous dialog, through their struggle for the implementation of the already concluded agreements, and through their effort for new treaties. As man cannot learn to swim without getting into water, neither can people reach reliable agreements and treaties on military detente without a dialog, without making a tenacious effort to learn how to negotiate for disarmament and to learn how to change the signatures on the agreements into the most humane act expressed with poetic symbolism by the saying "let us beat our swords into plowshares."

Czechoslovakia, together with the countries of the socialist community, has always assumed a highly active role in negotiations for disarmament. "We consider it necessary to strengthen political detente by a detente in the military area, to stop the hectic arms race and to safeguard the transition to the limitation of stockpiling of weapons and to disarmament."<sup>7</sup> That conclusion of the 15th CPCZ Congress serves as a constant directive for our conduct of foreign policy. It is an entirely logical and at the same time the most urgent requirement.

Czechoslovakia, a direct and active participant in the negotiations for disarmament in the Committee for Disarmament in Geneva and in the Vienna talks on reduction of armed forces and arms in Central Europe, also supports disarmament through initiatives in the Security Council where last

year in the autumn it was elected as a member pro tempore; moreover, it has presented its contribution to this year's special session on disarmament held by the U.N. General Assembly.

Not only at the above mentioned disarmament talks but also at every opportunity during bilateral negotiations Czechoslovak representatives are promoting their view that the welfare of the present and the future generations depends on a prompt and comprehensive achievement of military detente, because: - from the military point of view, the current potential of the already existing arms has surpassed a thousand times the total amount of arms used in all wars of the previous era, while the scientific-technological revolution and the revolution in military science, which is linked with it, are threatening with increasingly more new cycles of weapons on a much more sophisticated level than ever before;

- from the political point of view, a further expansion of armament would most negatively affect any further progress in the process of detente; it would act as a serious retardant and destabilizing factor in international relations and not only the economic but also the political influence of the military-industrial complex of imperialism would increase even further;

- from the socio-economic point of view, the armament race represents a gigantic brake which is depriving every nation of an ever increasing share of the wealth created by its diligent work; it hinders the solution of numerous urgent issues of global importance--such as the elimination of poverty and illiteracy of yet a considerable part of the world population, liquidation of serious diseases, the development of basically new sources of energy, the exploitation of the world oceans and of the outer space; it is pulling into its hectic race even scores of the young, developing countries, preventing them from a consistent fulfillment of development programs necessary for the growth of their national economy and undermining their independence.

Although there cannot be any doubts that detente expresses the main trend of the current international development, it must be noted that it is not the only trend. The peace policy whose proponent is the Soviet Union, our country and other states of the socialist community and which is supported even by the realistically-thinking circles of some states in Western Europe, is opposed by the dangerous attempts on the part of the reaction and, of those forces that are not interested in genuine peaceful coexistence and that are aggravating the atmosphere of fear, hostility and suspicion in relations between nations and states. They have chosen the adventurous policy of a kind of "tottering on the brink of detente," if not direct attempts to stop detente. That continues and develops the hectic arms race and ideological aggression against the revolutionary and progressive forces of our times.

A classic example showing the real attitude toward disarmament on the part of some such forces in the West is the "parallel" nature of two actions and two approaches which by coincidence took place early in June on the American continent. While the negotiations on disarmament were taking place in New York in the special session held by the U.N. General Assembly from whose forum the representatives of the leading imperialist states vowed in a polished manner that they wished to promote disarmament, at a meeting of the NATO council in Washington the same politicians did not hesitate to approve an extensive long-term program for further armament for the implementation of which the member countries of said alliance must raise their military budgets by an additional 80 billion dollars within the next decade. We cannot take lightly the take-off of the imperialist forces for new rounds of armament, accompanied by unsubstantiated statements and biased anticommunist fabrications about a "military threat" on the part of the USSR and the Warsaw Pact countries, coming from the mouths of the propagandists as well as responsible politicians.

Despite such disturbing moments the essential idiosyncrasy of the current struggle for disarmament is the fact that the current development in the world has rendered the reduction and cessation of armament, and disarmament objectively necessary and feasible. It must be noted again that on the basis of the changing international situation and the balance of power between socialism and capitalism the success in the struggle against militarism, the mobilization of broad masses for the struggle for reduction of armament, the bankruptcy of the imperialist efforts to blackmail socialism from a position of strength, objective conditions have already been created for a successful struggle of the socialist countries for reduction of armament and for the initiation of the process of disarmament.

At a special session on disarmament held by the U.N. General Assembly the Soviet Union presented specific acts which may advance the steps toward disarmament from their present form of a ripe, potential chance to the form of international law and practice. The minister of foreign affairs of the USSR, Comrade A. A. Gromyko, proposed there in the name of his government significant provisions whose implementation would not only reduce the enormous costs of armament but also diminish the threat of a development of a war conflict.

Next to the already published Soviet initiatives, the Soviet Union presented some new, very interesting specific proposals acceptable for every state without any exception in its document "On Practical Ways to Stop the Hectic Arms Race," which is fully supported by Czechoslovakia. Let us recall for instance the question of non-proliferation of nuclear arms in locations where thus far they have not been deployed. The Soviet Union adopted a very important obligation worthy of following, namely, that it would never use its atomic weapons against those states that have renounced the production and acquisition of such arms and that do not have

them deployed on their territory. Moreover, the Soviet Union is striving for the ban on the production and proliferation of neutron weapons and has called for a cessation of the development of the completely new types of potent conventional weapons of mass destruction.

Comrade Gromyko's address as well as speeches by ministers of foreign affairs of other fraternal socialist countries on that high platform of the largest world organization emphasized also the importance attributed by the socialist countries to the convocation of a world conference on disarmament. That appeal has been forcefully promoted also by Czechoslovak foreign policy at every type of multilateral as well as bilateral occasion. After all, the world conference would represent a totally new disarmament forum, qualitatively superior to all preceding negotiations. Its competence stemming from the political determination of governments to reach a decisive turn in disarmament would adequately guarantee that it could accomplish much more than the heretofore meetings of the U.N. General Assembly. Unlike the U.N. resolutions, which are mostly in the form of recommendations, the results of the world conference on disarmament would be in the form of binding regulations and literally constitute a norm which all states would observe and thoroughly respect.

The leader of the Czechoslovak delegation presented from the platform of the special U.N. session the legitimate standpoint of the government of the CSSR, namely, that at long last "real action programs" and not mere "rhetorics" are needed to promote disarmament.<sup>8</sup> At said session Czechoslovakia unambiguously proposed that nuclear armament be stopped first of all and furthermore, that the threat of the proliferation of nuclear arms be prevented, that the treaty on non-proliferation of nuclear arms be intensified and implemented fully and universally, while the activity of the international agency for atomic energy be also strengthened in that respect; moreover, our delegation promoted measures for a complete ban on the development and production of additional new types of weapons of mass annihilation whose construction "has already advanced from the realm of Utopia to a reality of our days."<sup>9</sup> The voice of Czechoslovakia spoke there also in favor of such important negotiations as the Soviet-American talks on the limitation of strategic arms, or the Soviet-American-British talks on the ban of nuclear arms tests.

At the special session the Czechoslovak delegation also most emphatically promoted the solution to problems connected with the ban of chemical and radioactive weapons, the conclusion of a worldwide treaty on non-use of force in international relations, and naturally also such relevant issues as the limitation of expenditures for armament and a substantial reduction of military budgets. As a Central European country and a direct participant in the Vienna talks, Czechoslovakia could not avoid expressing its view on that important issue before said forum. Here we again voiced our view that the fruitless negotiations which are dragging on for five years

already must finally disentangle themselves from endless debates of mere technicalities and constant manipulations with the so-called asymmetrical models which are in contradiction to the agreed-upon principles, and that they must proceed with their main task, the drafting of an entirely specific agreement.

Together with other socialist countries, Czechoslovakia rightfully emphasized that the hectic arms race is threatening all states equally and therefore that the main objective is the creation of stable, peaceful international conditions. In their effort to achieve it, however, the socialist countries are not concerned to secure peace only for themselves. They are also concerned about peace for the capitalist countries because peace has a universal value and validity for every country, for every continent. It may be said without any exaggeration that only thanks to continuous efforts of the socialist countries, the danger of a new world war has been considerably diminished and the peace strengthened.

Moreover, the great interest and inexhaustible energy of the socialist countries in their struggle for disarmament are best reflected in the emphasis placed on these issues during the official friendly visit by the delegation of the party and the government of the USSR in Prague this year. In their joint communique signed by comrades Husak and Brezhnev at the conclusion of their talks both fraternal countries addressed themselves to all states with their appeal for a prompt assessment of the whole complex of proposals for disarmament submitted by the Warsaw Pact countries.

Said document states: "Czechoslovakia and the Soviet Union hereby confirm the viability of the proposals presented in November 1976 by the political advisory committee of the Warsaw Pact member states and aimed at a reduction of the threat of war, cessation of the arms race and the achievement of disarmament; in their opinion it is of foremost importance to discuss the issue of completely stopping any further quantitative and qualitative expansion of arms and armed forces by states at whose disposal is a huge military potential, so as to create conditions for their gradual limitation."<sup>10</sup>

Like the Soviet Union and other socialist countries, Czechoslovakia does not see any more meaningful and urgent task on the intricate crossroads of the present world than the effort to stop the hectic nuclear as well as conventional arms race.

It is a difficult task at the completion of which appear the outlines of a decisive turning point in the struggle for the cessation of the hectic arms race, for a definite disarmament, for a total linkage of the political detente with the detente in the military area. In its service to that task--the most honorable mission that foreign policy can ever serve--our

Czechoslovak foreign policy does not spare nor will it ever spare its energies, the entire creative potential, skill, ability and political authority which our country now enjoys in the world.

Experience has demonstrated that Czechoslovakia may really contribute much on the balance scale of international politics. If during the years of crisis we maintained diplomatic relations with 88 countries, then that number has increased to 104 in the course of the next five years when our new party leadership succeeded in guiding our people and state out from the chaos; at the time of the Helsinki Conference we maintained relations with 105 countries. Today, thanks to our activity and initiative, that number has been raised to 122. In the entire preceding history of our foreign policy such a distinctive shift in Czechoslovakia's contacts with the world had never taken place within such a brief period of time. Our signature may be found under 2,000 bilateral and nearly 600 multilateral agreements. Czechoslovakia is a member of 60 international governmental and 1201 non-governmental organizations. Moreover, the volume of its cultural contacts with foreign countries has grown by full 30 percent in the past decade.

At the same time our country is developing contacts with other countries, with practically the whole world. The implementation of detente is inherent even there; even there appears the important aspect of good promotion of the socialist Czechoslovakia and every value of real socialism. We are always concerned in keeping the specific image of a broad and vigorous cooperation with all countries behind every number, behind every information concerning our international contacts.

Furthermore, we are concerned in being able to advance social progress in the world even better on the basis of this great international authority, standing even more firmly on the side of the revolutionary forces of our era in their great struggle for the cessation of the hectic arms race, for the achievement of a just and independent development of all countries, so that the anti-imperialist front may always find in our country an effective and dependable support.

#### FOOTNOTES

1. V. I. Lenin, "Collected Works," vol 33, Prague 1962, p. 384.
2. "Mezhdunarodnye otnoshenia i vneshnaia politika SSSR. Iстория и современность", "[International Relations and Foreign Policy of the USSR. History and Present]" Moscow 1977, p 6.
3. RUDE PRAVO, 18 March 1978, p 6.

4. RUDE PRAVO, 1 June 1978, p 3.
5. Ibidem.
6. RUDE PRAVO, 1 June 1978, p 3.
7. 15th Congress of the Communist Party of Czechoslovakia. Prague, Svoboda 1977, p. 93.
8. RUDE PRAVO, 29 May 1978, p 6.
9. RUDE PRAVO, 29 May 1978, p 6.
10. "Spolecne prohlaseni o dalsim rozvoji bratrskeho pratelstvi a vsestranne spoluprace mezi KSC a KSSS, CSSR a SSSR," [Joint Communique on the Further Development of Fraternal Friendship and Comprehensive Cooperation Between the CPCZ and the CPSU, the CSSR and the USSR] RUDE PRAVO, 3 June 1978, p 2.

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CZECHOSLOVAKIA

TRENDS IN HIGHER TECHNOLOGICAL EDUCATION IN CSR

Prague RUDE PRAVO in Czech 2 Oct 78 p 3

[Interview with Academician Bohumil Kvasil, rector of the Czech Advanced Technical School, by Michal Strida: "Communist Education"]

[Question] What are the primary tasks of the Czech Advanced Technical School (CVUT) in this school year?

[Answer] We shall try to fulfill the main tasks of the school in this year as we did in previous years. Among them are primarily problems concerning the communist education of the students. Our permanent main task is an increase of effectiveness of communist education, not merely in the field of ideological education of the students but also in the field of ordinary moral qualities which a graduate engineer entering practical life should possess. Those are primarily diligence and a sense of discipline, qualities of a politically mature citizen of the socialist homeland, so that enterprises or plants would not complain about a lack of these qualities on the part of our graduates. We have been stressing these points for a number of years.

Simultaneously we want to improve the scientific approach to questions of communist education. For instance, we carry through various inquiries among the students so that we may become familiar with their ideas and points of view which should enable us to apply our educational methods in a more effective way.

[Question] On which aspects will you concentrate in the specialized education?

[Answer] This year's main task will be to work out problems of the optimization of study. More is involved than a mere shortening of study in several faculties. Primarily we pursue two main goals: a reconstruction of the contents of study, stemming from the scientific-technological development of our society which is being projected into all fields of study at the CVUT, and simultaneously a total catering to current needs of practical life. Not only needs but also demands of our most important enterprises are constantly changing and that influences targets of study and utilization of capacities of our graduates. We have to conform to this situation.

[Question] Does the Czech Advanced Technical School cooperate with some large enterprises?

[Answer] On the basis of agreements we cooperate with most important enterprises, such as CKD Prague, aircraft plants AERO, ZPA, Tesla and even with the National Committee of the Capital City of Prague. Within the framework of secondary economic activity we simultaneously cooperate with a number of plants. Increasingly we take into consideration the needs of our national economy. Should I express the volume of this economic activity in crowns, I would have to say that it reaches an amount of Kcs 70 million annually.

[Question] Do the students take part in these two forms of cooperation?

[Answer] Certainly. Mainly within the framework of the student scientific-specialized activity. We are anxious to offer our students an opportunity to solve concrete problems of practical life already during their study. Another aspect of optimization of study is an innovation of the methodology of teaching. Briefly expressed: We do not want our students to listen in their classes to something they already have in their notes and textbooks. We want teachers to explain the more difficult passages, demonstrate the subject matter on concrete examples. Briefly: Participation of students in their classes should become more active. It will be neither easy nor simple, since the teacher's preparation for this type of work has to be incomparably more substantial.

A modernization of teaching tools is a part of all this. We have to set up model lecturerooms and furnish our departments with modern equipment in order to make students--already during their study--familiar with equipment at least as modern as that they will use in practical life. It is possible to say that our best equipped workplace is the department of electric machines of the Faculty of Electrical Engineering which has a model construction office including a computer which can be fed data and return completed designs. Students who are thus being familiarized with the most modern form of construction cease to consider construction work a drudgery with a pen and pencil at the drawing board.

[Question] However, will not the students' knowledge be primarily shown during their examinations?

[Answer] We do not want to choose a pedantic approach, any kind of badgering of students. We want to compare and control the comprehensive knowledge and capacity of the students. Not only to find out what they have actually learned, but also what their general qualities are. That enables us to form them further for the needs of practical life.

[Question] Twelve thousand students and several hundred educators of the CVUT represent a voluminous scientific-research base. Which tasks will you pursue this year?

[Answer] In the course of this school year there will be re-examinations of the targets of the state plan of basic research for the current Five-Year Plan. By the end of the year even the final re-examinations will be realized. Simultaneously there will be preparation of the scientific-research activity for the 7th Five-Year Plan. We want to remove some general imperfections which appeared in the scientific-research base and want to increase its effectiveness.

That means to solve primarily those problems which contribute toward development of individual scientific specializations, while they simultaneously contribute toward development of our national economy. It is a question of a closer linkage between science and practical life as well as a shortening of the cycle science-research-production-use. One way how to achieve it--which I already mentioned--is to conclude concrete agreements with enterprises. Another one is to form comprehensive rationalization brigades. This movement is already developing in our school and we shall support it. A further effort of ours is modernization of development laboratories which will allow us to examine certain tasks needed by practical life or applied research.

Education of young scientific workers is an intrinsic part of scientific work. We are trying to enable our students to cooperate in a concrete way on scientific-research problems already during their study. The leadership of the CVUT develops also this type of activity. For instance, 50 percent of activity of the Faculty of Nuclear and Physical Engineering is concentrated on research activity. Its students take systematic part in solving concrete scientific-research problems. This system of students' education is anchored in the faculty's statutes.

As far as material problems are concerned: All CVUT faculties are equipped with modern computer technology. We take part in solution of certain tasks of international standing. For instance, in the Interkosmos Program and in solving tasks in the nuclear physics field in cooperation with the United Institute of Nuclear Research in Dubno near Moscow. Recently, we have additional tasks connected with development of our microelectronics.

[Question] What are further prospects of development of the CVUT?

[Answer] We succeeded in finishing part of the area of the construction faculty, hence we gained some 10,000 or 11,000 square meters which is a considerable gain for us, since the number of students in our school increases yearly. The CVUT also takes part in construction of the so-called mathematics-physics teaching center which will be finished this year. Primarily the heavy laboratories [presumably for nuclear research] will be completed here, thus enabling us to realize even some complicated experiments.

Some difficulties still exist with the students' housing in dorms and with providing them with dining facilities. Although the number of our students increases annually--as required by future needs of our national economy--the capacities of these installations remain static.

CZECHOSLOVAKIA

'RUDE PRAVO' CRITICIZES WESTERN FASHIONS IN CSR

Prague RUDE PRAVO in Czech 11 Oct 78 p 2

[Article by Zdenek Kropac: "Voluntary Walking Advertisements"]

[Text] Many of us can still vividly remember the sad characters who used to appear in the city streets of the bourgeois republic. Those constantly hungry, shabby poor wretches, wearing ridiculous costumes with huge heads made of papier-mache which radiated strange, spasmodic grimaces. They were the walking advertisements for the Schicht soap from Usti, the Maggi soup stock or the Nehera ready-made clothing from Prostejov. They were on constant beat through the town, in spite of rain, snow or freezing temperatures, carefully watched by the advertisers: Woe to the marching advertisement who disappeared, even for a moment in an effort to hide before the ill weather. That put an end to his last opportunity to make a few meager pennies, demeaning and eroding human dignity down to the scarecrow costumes of clowns and beggars. And once more we are reminded of the gray army of the unemployed. These times will never return. This is the very reason why tousled and cracked jackets with emblems of the John Player's Team, Marlboro cigars, Levi Strauss underwear and even of reknown universities and colleges, as well as the sergeant stripes earned at the Little Big Horn, look especially wretched in our streets. For they are being worn by students and apprentices who are employed and who have never experienced hunger, and not only by them; even by overripe playboys in their fifties. These are the voluntary walking advertisements.

Possibly it could be justified by fashion: Fashion is fashion. But this is not fashion. It is a wretched and ridiculous obsequiousness toward something unworthy of men. It is not in the least "cosmopolitan." It amounts to nothing. "Look, buddy, he's speaking to me in English. He thinks I can understand him," wondered one of those walking advertisements for the Marlboro cigars yesterday in a streetcar. Presumably he did not realize that he was thus grading his own intelligence.

CSO: 2400

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## CZECHOSLOVAKIA

### INCREASING DIVORCE RATE AS SOCIAL PHENOMENON EXPLORED

Prague PRACE in Czech 4 Oct 78 p 4

[Article by J. Skaloudova: "An Entirely Private Affair?"]

[Text] A female reader sent us the following letter:

"Esteemed Editors, I believe that everyone requesting divorce should pay Kcs 100,000 to the welfare office which then would administer said money for benefit of the abandoned family. It is possible that people would give up flirtation which is the root of all evil."

A seemingly simple solution. Would it really solve the problem of divorces? We have a disturbingly high number of divorces in Czechoslovakia. We had 22.7 divorces for every 100 weddings in 1976. Every fourth marriage ends in divorce in the CSR. A number of phenomena influence the increasing divorce rate, among which are development of industrialization, urbanization and decrease of people working in agriculture in economically developed countries. The divorce ratio is also being influenced by the fact that marriage ceased to be an economic union of two partners. The wife's economic independence from her husband is inevitably expressed in higher demands on the partner, mainly in democratization of the family co-existence. This is supported by the fact that 60 percent of divorces are requested by women in spite of their knowledge that a divorced mother with two children has only a minimal chance of remarriage and that her economic situation will usually deteriorate. That happens because the alimony she receives from her divorced husband does not fully represent a half of a child's living expenses.

There are minors in two-thirds of the 25,000 marriages which are annually divorced in the CSR. The increasing number of marriages which remained undivorced, in spite of the fact that a request for divorce had been already submitted, may be considered a rather positive phenomenon. There were 3,000 such marriages in 1972 and already 9,000 last year. However, even officials in the field of jurisprudence evaluate this fact with caution, declaring that it may be ascribed among other things, to the

constantly increasing efforts of the courts to solve marital conflicts in a conciliatory way. How many of these still undivorced people will return and repeat their request?

It is necessary to eliminate divorces in a more effective manner--by prevention. One of its forms is social supervision. Statistics prove that the anonymity of large cities seriously influences the rate of divorce. Every experienced judge will tell you that people in a large city can afford more than they ever could in a village. Even more important is social supervision at the work place. Even social organizations could contribute to it. The marital and pre-marital advice bureaus call our attention to the fact--and it is a generally known fact--that extra-marital intimate relations often begin in the places of employment. They represent an important percentage of all adulteries which often cause divorces. It is understandable that these relations are often passively noted, even though their results for family life are well known. To neglect education and material support of children cannot be described as a purely private affair. Work collectives and social organizations may and should intervene into it. And once more we may turn to the experiences of marital and pre-marital advice bureaus: They confirm that many interventions on the part of the trade unions with the aim to save and solidify marriages are successful.

The CSR has 36 and the SSR 37 marital advice bureaus. They are to be constructed in every okres by 1985. It is doubtless that they may assume a significant role in the prevention of divorces. Their teams of specialists solved 8,500 marital cases in 1976 alone. It is estimated that in half of these cases resolution was either partly or fully successful.

But it is education for marriage and parenthood which assumes the most important role in the struggle against a high divorce rate. The best dowry children can get is responsibility to family and realistic ideas of paternal functions. Even school could even more effectively contribute to education for marriage and parenthood. There are still unused possibilities in the work of social organizations and in the field of culture. It is necessary to fill these gaps in the interest of all of us.

CSO: 2400

EAST GERMANY

GDR MARKS STATE ANNIVERSARY BY MILITARY PARADE

/Editorial Report DW/ The East Berlin Domestic Television Service in German, channel 1, at 0856 GMT 7 Oct 78 begins reportage from East Berlin's Marx-Engels Square where preparations are in full swing for the "military honor parade" marking the GDR's 29th anniversary. Col Gen Horst Stechbarth, deputy minister of defense and "chief of the ground forces," is commander of the parade and exactly at 0900 GMT he reports the parade units standing by for the review to Army Gen Heinz Hoffmann, GDR defense minister. Hoffmann "welcomes and congratulates" the different units on the "national holiday of the German Democratic Republic" and the troops reply with a triple "hurrah."

At 0907 GMT the parade units, according to the television announcer, take up their positions for the review on Marx-Engels Square.

The parade proper begins at 0911 GMT, the television announcer noting that the command car of Colonel General Stechbarth is leading the way. The first marching unit is a detachment of the Friedrich Engels Military Academy, commanded by Lt Gen Prof Hans Wiesner, the "chief of the GDR's supreme military learning institute." Following are two marching blocs of officer candidates of the Ernst Thaelmann Officer College of the Ground Forces, the announcer noting at this point that the "first flyer cosmonaut of the GDR, Siegmund Jaehn," is attending the parade on the grand stand. Next are two marching blocs of the Franz Mehring Officer College of the Air Forces and Air Defense, followed by officer candidates of the Rosa Luxemburg College for border troops.

At 0916 GMT the announcer reports a bloc of the Karl Liebknecht College of the GDR People's Navy marching past the grandstand, followed by a bloc of "noncommissioned officers of the Walter Steffen Fleet School." These units, he adds, bring up the rear of the marching parade.

The parade of the "military technical equipment" begins at 0920 GMT. According to the TV reporter, the commanding officer of an infantry division, Maj Gen Horst Zander, is leading the motorized units in the parade. He is followed by paratroopers of the Rudi Saenger Troop Component, riding on what the announcer refers to as "special cross-country vehicles." Next are reconnaissance units on "amphibious armored personnel carriers" which are

"extremely suited for cross-country operation." Just like the "red berets in the first detachment," the soldiers of this reconnaissance unit scored marks 1 and 2 in their training programs, the reporter notes.

Units of the Hans Beimler motorized infantry regiment form the next parade detachment. Their "amphibious eight-wheel armored personnel carriers are armed with a 14.5-millimeter gun and a heavy machine gun." Just recently, the announcer adds, the motorized infantry unit wound up a maneuver with good results. A detachment showing antitank guided rockets is next in line, "these rockets excelling by their high accuracy and effectiveness in combatting armored targets." During practice this year, the soldiers of the "Wilhelm Florin Regiment destroyed most of the targets with the first rocket," the reporter adds.

At 0923 GMT, artillery units under the command of Lt Col Joachim (?Konjetny) continue the parade. The first formation is an antitank unit with 100-millimeter antitank guns, drawn by "modern tracked vehicles," followed by a unit of multiple rocket launchers "mounted on heavy vehicles of the Tatra-813 type," the announcer adding that the multiple rocket launchers have 40 tubes. More artillery units are now passing the grand stand, a detachment of 130-millimeter guns leading the way, drawn by "Tatra trucks type 813." These guns are good for combatting targets at distances of "up to 30 kilometers" and with great accuracy, the reporter points out. Following are "heavy cannon howitzers, caliber 152 millimeter, of the Rudolf Buettner regiment."

Armored personnel carriers are next, "this time from the Paul (?Hegenbarth) regiment." These "combat vehicles of the BMP type, amphibious, extremely suited for cross-country operations, and armed with armor-piercing weapons, enhance the combat potential of the motorized infantry considerably," the reporter states at 0929 GMT. The "deafening clamor of the tracked vehicles on Marx-Engels Square" continues with "four-barreled antiaircraft guns on self-propelled armored carriages." This weapons system operates with electronic control.

The next parade unit, according to the announcer, is made up of the Friedrich Wolf armored regiment. The commander of the units in the "lead tank of the tested T-55 type" is Lt Col Manfred Dreher, a graduate of the People's Army Military Academy. The television cameras, the reporter announces, are now showing an antiaircraft missile unit of the Bernhard (?Faesslein) troop component of the ground forces. These antiaircraft missiles are mounted on "cross-country combat vehicles."

At 0933 GMT a unit of the "tested antiaircraft missiles of the air defense" continues the parade under the command of Col Heinz Naumann, also a graduate of the Friedrich Engels Military Academy. This unit is followed by "tactical and operational-tactical missiles of the ground forces", which also mark the conclusion of the "honor parade." The first unit of these rocket detachments is made up of "launching pads and transport vehicles of tactical mission." Bringing up the rear of the parade are members of the "Bruno Leuschner" troop component with their "operational-tactical missiles."

The National People's Army "honor parade" ends the review with the combined music band of the armed forces at 0938 GMT.

EAST GERMANY

BRIEFS

TRAINING FOR AFRICAN PHYSICIANS--An experimental course for advanced training of young physicians from nationally liberated states which will be held jointly beginning 1979 by the GDR and the United Republic of Tanzania, is now being conducted in Neubrandenburg. The main topic of the 8 week professional practical course for graduate physicians from six African states who were trained in the GDR is organization and development of basic medical care, particularly for the rural population. [East Berlin NEUE ZEIT in German 4 Oct 78 p 6 AU]

CSO: 2300

POLAND

CARDINAL WOJTYLA'S 20TH ANNIVERSARY AS BISHOP NOTED

Warsaw ZA I PRZECIW in Polish No 40, 1 Oct 78 p 8

[Article by Adam Paygert: "The 20th Anniversary of the Consecration of the Krakow Metropolitan as Bishop--Testimony to Thought"]

[Text] That life [of Cardinal Wojtyla] cannot be closed yet by any synthesis of the anniversary. It is proceeding on several paths--it is a pastoral, scientific, and literary activity, and it is also an administrative or educational activity. It is now worthwhile, however, to take a closer look at the person of the one who made the human person, its dignity, love, freedom, community of persons, and inter-person dialog the leading subject of his meditation on life and his priestly duties, which already have brought him a high rank in the intellectual and Church life in Poland and beyond its borders.

The Krakow archbishop and metropolitan, Karol Cardinal Wojtyla, is just celebrating (on 28 September 1978) the 20-year anniversary of his consecration as a bishop by his then ordinary, Archbishop Eugeniusz Baziak.

The call to the priesthood was generated in him almost simultaneously with the fondness for the word as the most important and most valuable manifestation of the human person. A secondary school graduate in Wadowice in 1938, he signed up for Polish studies at the Faculty of Philosophy of the Jagiellonian University in Krakow.

The closing of the university by the German occupation authorities forced the young student to discontinue his studies and to undertake manual labor in the quarries in Zakrzowek and in the Solvay Chemical Works in Borek Falecki near Krakow. One can imagine how much motivation and inspiration the impressionability of the young literary man with an intellectual inclination was drawing from the labor milieu, from the direct contacts with suffering and spiritual struggle, and from the examples of courage and cowardice, as well as from the self-sacrifice and meanness which surrounded him. The self-education efforts proceed further on a parallel path. In the apartment of Karol Wojtyla on Tyniecka street in Krakow,

under the direction of his subtenant Mieczyslaw Kotlarczyk, the Rhapsodic Theater (Teatr Rapsodyczny) is born conspiratorially--a theater of the magic of the word and operating with only the word as the subject matter. The young Wojtyla was one of its first actors and producers.

The later philosopher on the human person is sensitive to all encounters. A historical encounter for him was the one with Jan Tyranowski, a tailor by profession, who was a frequent visitor to the Salesian fathers in Debniki. In his article written several years later, appearing in TYGODNIK POWSZECHNY (No 35, 1949), entitled "The Apostle," Rev K. Wojtyla writes about him thus: "This was an apostle of divine greatness, divine beauty, and divine transcendence. He learned this from his main guide: that was St. John of the Cross." It may be that it is to this very tailor that Rev K. Wojtyla owes the great fondness for the teachings of the Spanish mystic--a fondness resulting, i.a., in the doctoral dissertation (1948) at the Dominican University in Rome entitled "The Problem of Faith of St. John of the Cross" and numerous later dissertations (for example, "On the Humanism of St. John of the Cross" in ZNAK, No 27).

After trips for studies to France, Belgium, and Holland, the young priest and theologian takes over the duties as a parish vicar in the [Church] parish in Niegowic near Bochnia. At the same time he earns a doctor's degree at the Faculty of Theology at the Jagiellonian University and during his later activity as a vicar at the parish of St. Florian in Krakow, he reveals his exceptional talents and spiritual qualities in work as the pastor of youth, a preacher, and a confessor.

The writer of these words, as a student in those years, belonged to the large circle of youth and adults who were enchanted with the eloquence and subject matter of the preaching of the then vicar of St. Florian's Church. His retreat teachings, devoted to the problem of sexual moderation, love, man and woman encounters, etc., were particularly engraved in my memory. The young retreat master discussed these issues with extraordinary delicateness (often not even making mention of the strictness of Christian asceticism in this field), always pointing to their connection with human bliss and spiritual development of the person.

Parallel to this course of preaching and pastoral work is the literary and scholarly development of the young priest. In the years 1951-53 Reverend Wojtyla is granted a leave of absence to prepare the doctoral work in the area of moral theology and social ethics. In the Fall of 1953 at the Faculty of Theology at Jagiellonian University his doctoral work, entitled "Assessment of the Possibility of Building Christian Ethics on the Assumptions of the Max Scheler System," is accepted, appearing in print in 1959 in the publications of the Catholic University of Lublin (KUL) Scientific Society. The subject of this work will set for many years one of the main directions of philosophical and theological interests of today's Arch-Prelate of Krakow. Max Scheler, one of the most eminent architects of

phenomenology, is perhaps his spiritually closest thinker. The Schelerian analysis of such phenomena as, for example, sorrow, forgiveness, shame, fidelity, humor, joy, and hope provides the young scholar a good methodological tool for the personalistic interpretation of the entire Christian ethos. Not much time is left for him to do the cherished research and thinking, for after many years of professorship distinguished by numerous dissertations in such publications as POLONIA SACRA, the KUL PHILOSOPHICAL ANNALS, SACERDOTAL ATHENAEUM (Ateneum Kaplanskie), ZNAK, and TYGODNIK POWSZECHNY, he is nominated by the Holy See to be bishop suffragan to the Krakow ordinary [Archbishop] Eugeniusz Baziak, by whom he is consecrated as a bishop on 28 September 1958 in the Wawel Cathedral. For several months before the opening of the Second Vatican Council (16 June 1962), the 42-year old vicar general becomes--after the death of Archbishop E. Baziak--the capitular vicar of his diocese. A new phase of activity is opened, which is connected with administering the diocese as well as with the work of the [Vatican] Council. Letters and the most varied impressions from the council sessions arrive in Poland which are published later in articles in various publications. Undoubtedly, little is known of the poetic creativity of the young bishop. Under the pseudonym, Andrzej Jawien, he publishes, among others, in ZNAK (No 113, No 119) his Vatican Council poems, for example, "Shepherds and Springs" ("Pasterze i zrodla"), "Birth of the Adherents" ("Narodziny wyznawcow"), "Reflections of Fatherhood" ("Rozwazania o ojcostwie").

After the second session of the council the capitular vicar in Krakow receives a papal nomination as Krakow archbishop and metropolitan (30 December 1963). Three years later, on 9 July 1967, the Krakow hierarch receives the cardinal's hat. At that time he is one of the youngest members of the College of Cardinals.

Already, while carrying out his duties as bishop, there appears the most well-known book of our cardinal entitled "Love and Responsibility. An Ethical Study" ("Milosc i odpowiedzialnosc. Studium etyczne") (Krakow, 1962, published by ZNAK). Excerpts from this book, published earlier in the SACERDOTAL ATHENAEUM and ZNAK, are the fruit of many sermons and retreats on the subject of love, marriage, encounters of persons, respect, dignity of the person of the marriage partner, dialogue, etc. In 1968 when the encyclical "Humanae Vitae" arouses a wave of opposition, Cardinal Wojtyla writes a lengthy "Theological-Pastoral Commentary to Humanae Vitae" (Rome, Main Center of the Emigration Pastorate, 1969). The second train of theological interests, the human person, is crowned by the large work entitled, "The Person and the Deed" ("Osoba i czyn") (Krakow, 1969, Polish Theological Society). The pastor, philosopher, and theologian received in the work of the Council, and then in the synodal work (during subsequent sessions of the Synod of Bishops), a powerful incentive for reflections. Then there appear, in addition, his studies on the function of theologians in the Church, on the laity, on the relation of Christianity to culture, on the relation of Christianity to the values of the temporal world, etc. These papers bear fruit later in the dissertation entitled, "The Study on the Implementation of Vatican II" ("Studium o realizacji Vaticanum II") (Polish Theological Society, Krakow, 1972, pp 327).

Undoubtedly that fullness of thought reflecting on the experiences of the pastor, teacher, and professor and also the great wisdom of compassion for the modern man became the reason for inviting the Krakow metropolitan and cardinal to hold the retreat in March 1976 for Pope Paul VI, the Dignitaries of the Vatican Curia, and members of the Papal Family. These meditations appeared afterwards in print under the title: "The Sign Which They Will Oppose" ("Znak, ktoremu sprzeciwiac sie beda") (Pallottinum, 1976), whose excerpts appeared earlier in the monthly publication ZNAK (No 268).

Stanislaw Grygiel crowns his review of this [above] book under the title: "Experience and Witness" ("Doswiadczenie i swiadectwo") (TYGODNIK POWSZECHNY No 32, 1976). Appealing to his distinguished audience for constant witness to the full truth about man and God, the retreat master expressed here his deepest many-year mediation, which "from within the being of everyone and all at the same time" leads the mind to God. Helpful to him on this path were St. John of the Cross, St. Thomas of Aquinas, Max Scheler, Father Maximilian Kolbe, examples of the life of colleagues-workers, colleagues-actors, colleagues-bishops, the world of poetry and philosophical speculation, and he benefitted from the pastoral inspiration of his great predecessor, Metropolitan Adam Sapieha, as well as Archbishop Eugeniusz Baziak. On this path he sowed pastoral seeds-words and gathered the harvest of fruits and joys. May this sowing and harvest continue, may he bear fruit through God's graces, may they favor his arch-pastoral work, his scholarly work, and work as chairman of the Commission of Studies of the Polish Episcopate, as well as work within the framework of the Synod of the Krakow diocese which has already begun. We are awaiting his books and lessons transforming the deeds of each one of us.

CSO: 2600

POLAND

PASSIVE, ACTIVE SATELLITE DEFENSE DISCUSSED

Passive Defense Objectives

Poznan PRZEGLAD WOJSK LOTNICZYCH I WOJSK OBRONY POWIETRZNEJ KRAJU in Polish  
No 6, Jun 78 pp 102-107

[Article by Engr-Lt Col Stanislaw Mrocze: "Conduct of Passive Combat Against Hostile Space Reconnaissance"]

[Text] In a time of extensively-developed satellite reconnaissance systems control of operational troops, as well as functioning of the OTK [National Territorial Defense] system will be determined, among other factors, by the element of surprise, available time, and deceipt of the adversary.

One means of deceiving the enemy is conduct of a passive effort against space reconnaissance. This effort constitutes one of the categories of operations support conducted by all operational arms, OTK, and self-defense subunits in time of peace, war threat, as well as wartime.

Measures planned and executed within the framework of conduct of a passive effort against space reconnaissance should comprise an inseparable component part of traditional types of concealment and camouflage.

Examining problems of conduct of a passive effort against space reconnaissance capabilities, it is necessary to place them within an appropriate framework of definition and precisely to specify the concrete general principles and methods of their implementation.

We call principles of conduct of passive combat against means of space reconnaissance those sets of rules and standards of action, historically determined by development of hardware and operational art, in the area of planning, organization and utilization of manpower and equipment for deceiving the enemy as regards the objectives and intentions of combat actions or operations being prepared (planned) or conducted, as well as location areas of installations of military significance.

The following are the main principles of conduct of passive measures against satellite reconnaissance:

1. Strict observance of secrecy in the area of planned and executed measures;
2. Activeness, continuity, coordination and discipline of conducted measures;
3. Effectiveness of executed measures;
4. Participation of all arms and services as well as OTK units in performance of concealment and camouflage tasks, in conformity with their specialization and capabilities;
5. Minimization of flow time for information on the adversary's space reconnaissance hardware (utilization of computers);
6. Probability of implemented concealment and camouflage tasks, particularly in the area of decoy and feigning activities;
7. Purposefulness and economy in the area of utilization of manpower and equipment;
8. Optimal utilization of natural terrain concealment and protective properties;
9. Detailed knowledge of the adversary's manpower and equipment as well as capabilities in the area of conduct of satellite reconnaissance.

Most of the above-listed principles are obvious and do not require substantiation; we should, however, direct some attention to the mode of implementation of the principle of maintaining secrecy as well as effectiveness of camouflage and concealment.

Secrecy in planning and implementing concealment and camouflage measures shall be unconditionally observed by all appropriate commands, staffs and individuals responsible for individual components of the nation's economy operating for military needs in time of peace, war threat and in wartime. Persons engaged in concealment and camouflage activities must be aware of the importance of the measures being planned and executed. It is essential to limit to a maximum degree the number of persons engaged in elaborating appropriate plans (the most important items cease to be a secret if too many people know about them). Personnel engaged in performing tasks pertaining to concealment, camouflage, decoy and feigning activities should not always possess knowledge of the nature and purpose of the tasks they are performing. We are familiar with unfortunate examples from World War II and local wars where the most precise plans (including in the area of concealment and camouflage) reached the enemy by various paths, nullifying great expenditures of manpower and resources.

Effectiveness of concealment and camouflage (reducing correctness of enemy information on our facilities) consists in determining the degree of concealment and camouflage of actual installations and building dummy installations, in order to achieve optimal results with a minimum expenditure of manpower and resources.

Effectiveness of concealment and camouflage is directly dependent on conditions which can affect the end result.

These conditions include the following:

categories, means and capabilities of hostile satellite reconnaissance;  
features of the concealed and camouflaged facilities;  
concealing character of the terrain;  
manpower and resources designated for concealment and camouflage activities.

After taking the appropriate conditions into consideration, we can present the problem of effectiveness in mathematical form, according to the following formula<sup>1</sup>:

$$E_c = P_{in} - P_{id} \cdot K,$$

where:

$P_{in}$  -- probability of identification of an actual installation without concealment or camouflage;  $P_{id}$  -- probability of identifying that installation following concealment or camouflage;  $K$  -- factor taking into account the effect of dummy installations on determining installation identification probability.

We can calculate factor  $K$  with the following formula<sup>2</sup>:

$$K = \frac{1}{1 + \frac{P_1 \cdot N_d}{P_{id} \cdot N_g}}$$

where:  $P_1$  -- probability that the adversary has taken a dummy installation for a genuine installation;  $N_d$  -- number of dummy installations;  $N_g$  -- number of genuine installations.

When concealment and camouflage do not take into account dummy installations ( $N_d=0$ ),  $K=1$ .

Effectiveness of concealment and camouflage will have a value from 0 to 1. When  $E_c=0$  all installations have been identified, while when  $E_c=1$ , genuine installations have not been discovered.

Effectiveness of concealment and camouflage can be increased by:

decreasing probability of detection of actual installations;

increase in probability that the enemy will take dummy installations to be genuine installations.

Under conditions where total concealment and camouflage of actual installations is impossible (on open terrain, on bodies of water), construction of dummy objects is the sole and basic method of concealment and deception. In such an instance the enemy is forced to seek out genuine installations with a certain probability.

Figure 1 shows the relationship between the ratio of dummy to genuine installations with a corresponding probability of detection as well as their influence on effectiveness of concealment and camouflage.

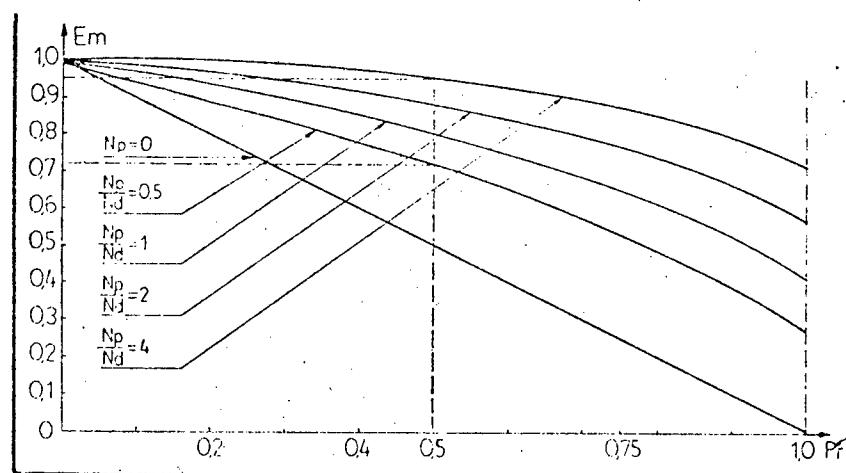


Figure 1. Indication of Effectiveness of Concealment and Camouflage Against Recognition from the air (space):  $E_c$  -- effectiveness of concealment and camouflage;  $P_{id}$  -- probability of identification of installation following concealment and camouflage;  $N_d$  -- number of dummy installations;  $N_g$  -- number of genuine installations

An examination of the diagram confirms that when probability of detection is 0.5, for example, the ratio of dummy to genuine installations is also 0.5, effectiveness of concealment and camouflage is 0.72. If the ratio of dummy to genuine installations is 4:1, effectiveness of concealment and camouflage increases to 0.95. Hence the conclusion that with an eightfold increase in the number of dummy installations, effectiveness of concealment and camouflage will increase by only 23%. If the probability of detection of genuine installations ( $P_g=0.5$ ) is small, employment of a large number of dummy installations becomes inadvisable, for effectiveness of concealment and camouflage increases insignificantly, while the quantity of manpower and resources on constructing these installations increases immensely. If the probability of detection of concealed genuine installations is less than 0.5, it is sufficient to construct not more than one dummy installation for every genuine installation.

## Objectives of a Passive Effort Against Reconnaissance Satellites

The general goal of a passive effort directed against reconnaissance satellites is to deceive the enemy (through concealment, simulation, configuration change, or feint) as regards planned intentions or actions in progress, deployment of troops and installations of military significance, which could be attractive targets for mass destruction or conventional weapons.

Specific objectives are determined by the concrete battlefield requirements and proceed from plan-specified intentions in progress, as well as current foreign policy (applies to peacetime).

In a period of threat of war or in wartime, objectives in specific operations should lead to:

achieving the element of surprise to a maximum degree;

defeating the adversary with minimal friendly casualties and losses;

reduction of casualties and losses resulting from strikes by mass destruction weapons;

inducing the adversary to attack dummy installations or installations of little importance, thus scattering his efforts;

concealment of friendly forces and installations from satellite surveillance, thus reducing casualties and losses from nuclear strikes;

concealment of one's intentions.

## Tasks of Passive Effort Against Satellite Reconnaissance

The content, category, quantity, quality and scope of tasks proceeds from the objective of planned and conducted operations, quantity of manpower and resources, degree of intensity and scope of conducted satellite reconnaissance, time required to prepare for and conduct operations, degree of electronic countermeasures, air defense, etc.

Basic tasks in the area of conducting a passive effort against reconnaissance satellites include:

1. Preparation and conduct of simulation actions;
2. Conduct of feigning activities;
3. Development of phony troop assembly areas and military installations;
4. Concealed redeployment of troops (redeployment of tactical combined units, detachments and combat equipment);

5. Construction of dummy command posts;
6. Construction of a dummy road net, roadside facilities, loading-unloading sites and river crossings;
7. Organization of phony electronic identification systems;
8. Collection of information on the system and modes of identification employed by enemy reconnaissance satellites as well as study and synthesis of experience and know-how;
9. Optimal utilization of organic camouflage and protective gear, materials at hand, and terrain concealment properties;
10. Observance of discipline and verification of quality of work performed.

#### Utilization of Manpower and Resources for Combatting Satellite Reconnaissance

Organic camouflage equipment and materials at hand are utilized for conduct of a passive effort against satellite reconnaissance.

Organic camouflage equipment includes the following:

- individual gear (clothing, coveralls, camouflage nets and helmets);
- sets of camouflage nets for concealing weapons and equipment;
- kits for camouflage-painting combat equipment;
- smoke-generating and pyrotechnic equipment;
- other materials, such as wire, lumber, etc.

Improvised means of camouflage include all possible materials which can be utilized for simulation and feigning actions.

Camouflage with technical methods is employed in combat operations, including: camouflage with light, paint, noise, and smoke.

Mock-ups of combat equipment, silhouette distorters [odbijacz katowy] and pyrotechnic devices are utilized for decoy deception, distortion and feigning operations.

Within the framework of conduct of passive efforts against satellite reconnaissance, engineer measures are taken which are aimed chiefly against optical, radar and infrared reconnaissance. These measures are executed by special engineer troops camouflage subunits and by all other operational arms and OTK, in conformity with their capabilities. Camouflage subunits perform tasks connected with concealment and simulation of important

installations: command posts, bridges, river crossing sites, supply dumps, airfields and troop assembly areas.

Engineer troops should possess various technical equipment: camouflage nets, mock-ups of combat equipment, corner reflectors, dummy bridges, earth-moving equipment, paint kits, etc. The camouflage and simulation properties of engineer equipment should ensure accomplishment of missions in the area of countering satellite reconnaissance.

Simulation activities should extensively employ corner reflectors, which to a substantial degree increase the number of detected objects and thus make it difficult to determine the actual targets to be attacked.

As a result of skillful performance of concealment and camouflage measures, the effects of enemy nuclear strikes on friendly troops or installations can be reduced by 15-25%.

#### Capabilities and Methods of Concealing and Camouflaging Troops and Military Installations Against Satellite Reconnaissance

Utilization of terrain natural concealment properties should be a principal undertaking in the conduct of passive efforts against satellite reconnaissance. Natural screens give considerable protection to all types and modes of satellite, aircraft and ground reconnaissance. They form an effective screen against radar, night-vision and TV reconnaissance.

Individual military targets (tanks, armored personnel carriers, tractors, etc) can be concealed by siting them behind or close to terrain objects, depending on the resolving power of the devices installed on reconnaissance vehicles.

Utilization of terrain concealment properties is particularly important since it produces relatively good results with very little investment of manpower and resources.

Construction of dummy installations and troop assembly areas aims at deceiving the adversary regarding quantity and location of actual installations. During construction it is necessary to observe all basic principles and the sequence in which genuine installations are built. The number of dummy installations constructed depends on current conditions, manpower, means and capabilities, proceeding on each occasion from the principle of effectiveness of concealment and camouflage. Units and subunits consisting of different arms, depending on the function and types of installations involved, are designated for construction and animation of dummy installations and troop assembly areas.

Engineer troops perform concealment, camouflage and simulation work with the aid of engineer vehicles. They construct and install more complicated equipment mockups, simulate explosions, build and maintain dummy installations, set up dummy organic bridges and lay dummy minefields.

Infantry is utilized for building and installing simple mock-ups, for constructing field-fortified areas and dummy installations, for simulating road traffic, maneuver, and defensive activities.

Tank and artillery subunits take part in building and installing mockups, running tank tracks up to mockups, feign vehicle traffic and antiaircraft defense.

Chemical warfare troops generate smoke screens (at the moment hostile reconnaissance aircraft or satellites appear), and simulate fires, utilizing flame and smoke devices.

Commanders at all echelons are responsible for planning proper, organization and execution of these missions. The following constitute the basis for planning tasks connected with carrying out a passive effort against satellite reconnaissance:

the commander's decision, which should contain the general objective and missions;

directives and instructions pertaining to the above;

manpower and equipment which can be utilized to perform camouflage and concealment tasks;

time designated for accomplishing the assigned missions;

resources, hardware, methods and modes of conduct of reconnaissance by the enemy.

Plans for conduct of a passive effort against reconnaissance satellites should be implemented at the operational echelon and should be incorporated into the general operational concealment and camouflage plan, which can be elaborated in graphic form (on a map with legend).

In addition to the plan, in conformity with general guidelines, commanders and staffs elaborate instructions (directives), communicate tasks to executing personnel, and verify their execution.

On today's battlefield, where the adversary is constantly introducing new resources and hardware in the area of satellite reconnaissance, the role of commanders and staffs will be decisive in on-schedule performance of missions. Correct organization of work and coordinated action by interested persons in the area of information processing and immediate communication to executing personnel of information on reconnaissance hardware (orbit, reconnaissance satellite overflight time, etc) will determine the success of concealment and camouflage undertakings. In summary, one can formulate the following conclusions:

1. In present-day combat operations the conduct of a passive effort against reconnaissance satellites will constitute an important element of troop protection against the casualty-producing effects of nuclear weapons, an essential condition for gaining the element of surprise, ensuring successful achievement of stated objectives and tasks.

2. In connection with the dynamic evolution of means of reconnaissance, making it possible to perform target reconnaissance in a short period of time -- regardless of location, time of year or weather, immediate and effective countermeasures are becoming essential, involving utilization of modern concealment and camouflage techniques.

3. The thrust of future research and development should be directed toward developing effective materials to counter modern satellite reconnaissance hardware.

4. The forms and methods of camouflaging and concealing troops and installations should be continuously improved (conduct of studies and research), taking into account experience and conclusions from the recent wars in Southeast Asia and the Near East.

5. Alongside employment of the latest standard technical means and methods of concealment and camouflage, we must state that utilization of the concealment and protective properties of the terrain does not become less important, but on the contrary should become a principle which is rigorously observed by all interested commands, staffs and units, as one of the most important elements in protecting troops and installations.

#### FOOTNOTES

1. VOYENNAYA MYSL', No 6, 1973, page 36.

2. VOYENNAYA MYSL', No 6, 1973, page 37.

#### Active, Passive Defense Measures

Poznan PRZEGLAD WOJSK LOTNICZYCH I WOJSK OBRONY POWIETRZNEJ KRAJU in Polish No 7-8, Jul-Aug 78 pp 17-20

[Article by Lt Col Mieczyslaw Chamera: "Effort Against Hostile Space Reconnaissance"]

[Text] One of the most important of the many areas of research conducted on utilization of space is research on the possibility of utilizing space for military purposes. There are two principal areas of emphasis in this research:

1. Utilization of space as a further expansion of the third dimension of combat operations;

2. Satellite intelligence-gathering to determine the economic-military potential and deployment of the military forces of the adversary.

As regards the first area, it definitely encompasses a broad range of items connected with active space, aerospace or space-earth combat. It also encompasses utilization of other planets (moon, Mars, Venus, etc) for military purposes, primarily as strategic arms launch bases and storage. These items may apply to the more distant future, but satellite reconnaissance is already being conducted today. It presents a highly formidable threat in view of the fact that:

it is capable in peacetime of obtaining certain information on the infrastructure of the opposing side, on disposition and deployment of military forces on the adversary's territory, on the location and state of preparedness of individual elements of military potential, and particularly missile and aviation units, naval bases and troop dispositions;

under favorable conditions photographs taken from space can resolve ground objects measuring between 10 and 20 centimeters, which means a capability to determine quantity, category and type of combat hardware and equipment as well as all ground installations of a military and economic character;

utilization in satellite reconnaissance of infrared cameras, low-light TV cameras, electronic equipment, etc, is producing an increasing capability to conduct effective satellite reconnaissance, day and night, in all weather;

under favorable weather conditions the least time required to transmit images from space by telemetry can be about 2 hours, and about 8 hours with ejection of a container of photographic material. This is actually very fast. Even if we assume that troops will be aware of the overflight of a reconnaissance satellite, there will be little time to remove units or installations from the threatened area or to take other preventive measures.

In view of the above facts, antisatellite defense will play an important role. The general objective of antisatellite defense may be protection of the nation's territory or dispositions of military forces from hostile reconnaissance satellites. Therefore the mission of antisatellite defense will be as follows:

destruction or neutralization of enemy combat systems attacking from space or the aerospace environment;

immunization of the defense system, economy and the entire infrastructure against satellite reconnaissance.

The first mission applies chiefly to wartime and falls into the category of active defense. Active combat against satellite hardware, including satellite reconnaissance, should encompass operations of ground and satellite weapons systems designed to destroy enemy space vehicles in the air and space,

as well as strikes against strategic offensive air weapons, with the objective of destroying production of space hardware, rocket launch facilities, aerospace aircraft fields, and ground satellite control systems. These defensive activities should include detection of the above-listed items, guidance of defensive weapons to them prior to reconnaissance from space, as well as their destruction or neutralization.

Since each of these tasks will be performed by a specific team of personnel and equipment, active defense against reconnaissance satellites should encompass:

means of recognition, detection, and identification of hostile satellites, operating within the framework of the space surveillance system;

a system of active means of combat (ground-launched and orbiting satellite killers);

operational reconnaissance satellite defense command and guidance facilities.

The first category should include radar facilities, radio transmitter and receiver network, a network of orbital tracking stations, infrared detection and ranging equipment, radio telescopes, etc, as well as aggregates of electronic digital computers, TV and radio equipment working in coordination with them. An example of such a detection and surveillance system is the U.S. SPADAS system.

The second group of resources and means of actively combatting reconnaissance satellites should be capable of combatting reconnaissance satellites and may include primarily antisatellite systems, antimissile missiles, etc. As an example we might mention the U.S. Nike-Zeus, Thor-Agena and Easli-Spring antisatellite systems.

While active combat against reconnaissance satellites will take place essentially in time of war, passive efforts must take place in peacetime, during threat of war, and in wartime. At the present time a passive effort against satellite reconnaissance should be mounted. Contrary to appearances, conduct by one country, ours for example, of a passive effort against reconnaissance satellites by no means constitutes a supplementary effort to active combat but is the principal kind of combat against satellite reconnaissance.

In organizing a passive effort against reconnaissance satellites, one must create conditions whereby information transmitted from reconnaissance satellites will be of little or no use.

This effort should include an aggregate of operational-tactical and technical measures undertaken by all branches of the armed forces and all national defense elements. The content and scope of these measures should be determined chiefly by the concrete political and military situation.

In order effectively to apply a passive effort against satellite reconnaissance it is necessary to take a number of measures of an operational and technical character. Decisions made by specific commands and staffs should among other things cover undertakings in the area of concealment and camouflage, and consequently restriction of movement of personnel and combat equipment, blackouts during hours of darkness, increased concealment of activities conducted at various facilities (for example, at airfields, military bases, etc), at launching and firing positions, performance of activities connected with increasing combat readiness, simulation of normal activities at dummy installations, as well as restriction on the operation of certain radar and radio facilities operating in defense systems, etc.

In order for commands and staffs to be able to perform the specified activities, we must obtain information on overflights by enemy reconnaissance satellites sufficiently ahead of time. Prediction and tracking of hostile reconnaissance satellite overflights as well as communication of this information to appropriate troops and installation personnel demands, however, a space surveillance system. This system should provide the capability to obtain information in the area of:

purpose of a satellite;

dimensions of area under surveillance;

time and path of overflight over our territory.

Requisite for execution of the above-named measures requires an integrated surveillance and warning system on the scale of a defense system. Possession of such a system by a single medium-size country is of little or no value, because there will be little time after establishing the flight of a reconnaissance satellite to warn troops and installations.

Independent of temporary passive measures which should be carried out by troops and facilities during overflight by reconnaissance satellites, it is also necessary to employ traditional concealment and camouflage measures, carried out within the framework of tactical and operational camouflage and concealment. These measures aim at diminishing the probability of detection of troop concentrations and installations and at making it possible to conceal the specifications and performance characteristics of equipment, our plans and intentions, etc.

The general principles of concealment and camouflage of troops and installations should approximate the principles of concealment and camouflage conducted against hostile reconnaissance aircraft. In order to achieve optimal effects of concealment and camouflage it is necessary to specify the means and methods of concealment and camouflage, their implementation and periodic checking with the aid of friendly reconnaissance satellites.

As regards concealment and camouflage against satellite reconnaissance, these principles should be observed particularly in building new military installations

and development of new weapons systems. It is my opinion that new military installations should be put into operation only after completion of all necessary concealment and camouflage activities. What I have in mind is total completion of these activities, consequently securement of concealment and camouflage against photographic, radar, radio and other reconnaissance.

Deception through dissemination of false information will also play an important role in the conduct of passive efforts against satellite reconnaissance. The main thing here is dissemination of false information with the aid of technical means of communication as well as construction of dummy installations. Primary simulation and feigning items are areas of deployment of strategic and operational reserves, dummy airfields, missile launching sites, communications systems, radar reconnaissance systems, bridges, river crossings, operational-echelon command posts, etc.

In order for this form of countermeasures to be effective, however, they must be elaborated and executed according to a uniform plan. Such a plan should be elaborated by the central command echelon and subsequently detailed in the separate arms and operational formations. It should take into account all measures undertaken by the military both in peacetime and in case of war threat and actual war. And there is no doubt that a system of passive countermeasures against satellite reconnaissance should also exist in peacetime. Such a system should operate in a normal manner and periodically be checked and improved, particularly as regards communicating information to executing personnel and the effectiveness of concealment and camouflage measures. Concealment and camouflage of primary-importance installations must be thorough and complete, but this does not mean that it is not necessary to conceal and camouflage other installations of operational-tactical and tactical significance.

It is my view that in peacetime it is not expedient to build dummy installations, for the adversary has considerable time available and is able to identify these installations with other means of intelligence-gathering.

In order to increase the effects of concealment and camouflage it is necessary in a time of threat of war, and particularly in time of war, to build dummy airfields, antiaircraft missile sites, command posts of various echelons, radar sites, etc, siting them at appropriate distances from genuine installations. It is also essential to camouflage-paint combat and support equipment, as well as periodically to change the elements of a force grouping. Concealment and camouflage of radio communications systems in all services and arms should make it impossible to determine from space the revealing signs which give away these systems. One should place particular emphasis on concealing the deployment of radio facilities, their affiliation, organization of systems as well as modes of operation of radio and radio relay communications.

The problem of countermeasures against hostile satellite reconnaissance is difficult both in regard to quantity and scope of measures and the necessity of assigning considerable material and financial resources to this task. In the final analysis, however, these measures, particularly in the area of passive countermeasures against hostile satellite reconnaissance, will definitely pay off.

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3024

CSO: 2600

POLAND

WEST'S WILLINGNESS AT MBFR TALKS QUESTIONED

Warsaw ZYCIE WARSZAWY in Polish 28 Sep 78 p 4 AU

[Andrzej Rayzacher PAP dispatch from Vienna: "Socialist Countries Are Awaiting Reply From the West--Resumption of Vienna Negotiations"]

[Text] The first plenary meeting of the participants in the Vienna negotiations following the summer break will be held on Thursday, 28 September. It will be the 179th meeting since the talks began. The 16th round of negotiations on mutual reduction of armed forces and armaments in central Europe will begin in an atmosphere in which the socialist states are awaiting a reply from the Western participants in the negotiations to the June proposals.

On 8 June of this year the USSR, the CSSR, the GDR and Poland agreed that the final aim of the two-stage reduction in armed forces should be to achieve identical ceilings on the numerical strength of the armed forces of the two groupings in central Europe, amounting to 900,000 men each, including 700,000 ground troops each. Given the guarantee that in the second stage of reductions the West European NATO states and Canada will participate, the USSR will agree to reduce twice as many soldiers as the United States in the first stage. The socialist states' compromise position has greatly increased the possibility of an agreement; of course, under the condition that the West will give its constructive reply now, without an undue delay.

But on the eve of the 16th round of negotiations the opinion in Vienna is that the Western participants in the negotiations do not intend to hurry. Instead they will concentrate on the secondary aspect of the discussion, that is, on the so-called military data. Senator Joseph Biden's report for the Senate Foreign Relations Committee, which was published at the beginning of September, contains such recommendations.

The Bonn government's official representatives, including Defense Minister Hans Apel, have also made statements that tie progress in the Vienna negotiations to extending the disarmament dialog to the "grey zone" of

the so-called "Eurostrategic" nuclear system. This poses the question of whether this is not an attempt to create some sort of linkage, which would justify delays in the Vienna negotiations. It is worth recalling that it was precisely the Western states that were against extending the process of reductions to the armed forces, within the two groupings that possess nuclear weapons. Let us add that the Warsaw Pact countries have often stressed that a favorable result in the Vienna negotiations would make it possible to create new areas for the disarmament dialog.

The activity of NATO gives rise to further questions concerning the intentions of the Western side. A particular point at issue is a series of some 30 fall maneuvers and exercises under the code name "autumn forge" that are being held from Norway to Turkey involving as many as 323,000 soldiers. The provocative nature of this demonstration is so obvious that it has come up for discussion even in the West German Ministry of Defense. Andreas von Buelow, secretary of state in that ministry, has asked with justification whether such massive maneuvers arranged by NATO supreme commander General Haig will harm detente and create tensions in relations with the FRG's eastern neighbors.

The highly negative influence exerted on the atmosphere of the Vienna negotiations by statements such as the recent appeal by NATO General Secretary Joseph Luns addressed to President Carter that the production of the nuclear neutron bomb should begin, is also being felt in Vienna. In this situation observers of the Vienna negotiations, which will be 5 years old within a month, are asking themselves whether the antidependence centers in the West want to contribute to hindering progress in disarmament negotiations by creating just such an atmosphere. The Western delegations' position during the 16th round of these negotiations will show whether these assumptions are correct.

CSO: 2600

POLAND

PEASANTS PROTECT PARISH PRIEST FROM POLICE

Bonn DIE LANDWIRTSCHAFT DES OSTBLOCKS in German Vol 26 No 36, 4 Oct 78 p 6

[Text] In the eastern Polish village of Zbrosza Duza in Lublin Voivodship the church bells peal when security agents or police patrols enter the village. Moreover, the sirens of the voluntary fire department summon all the peasants lingering in the fields back to the village. The peasants then form a tight circle around the parsonage and deny the police officers access to parish priest Czeslaw Sadlowski. So far the police have found no antidote for the peasants' resolute stance.

The history is as follows: On 9 September 1978 a "Committee for Peasant Self Defense of Grojec" was organized. Peasants from 16 villages of the region of Grojec resolved at a public assembly to found the committee and passed a resolution protesting the excessively high contributions required for the old-age pensions. At the same time the peasants refused to make the payments in the prescribed amounts and declared that they would resist forced collection. The resolution, signed by 188 peasants, was subsequently left with the village priest. Police attempts to get the priest to turn over the document have thus far failed. The officials prefer to leave the village when the bells start ringing.

The peasants of Zbrosza Duza had already shown their teeth to the authorities once before. A few years ago the police used bulldozers to tear down a chapel built with voluntary labor. At that time there were violent confrontations with the outraged villagers. Since then they succeeded in getting a building permit for construction of a village church. It is from the tower of that church that the bells ring out when the police come.

CSO: 2300

POLAND

BRIEFS

KARKOSZKA, LUKASZEWCZ MEET WASILEWSKI--Andrzej Wasilewski celebrated his 50th birthday yesterday. The 30th anniversary of the beginning of this well-known literary critic's and cultural activist's career is also celebrated this year. In this connection Edward Gierek, first secretary of the party central committee, has sent Andrzej Wasilewski a letter of congratulations and wishes for more years of fruitful work. Members of the Warsaw Party Committee leadership met with Andrzej Wasilewski yesterday. During the meeting Alojzy Karkoszka, secretary of the party central committee and first secretary of the Warsaw Party Committee, congratulated Andrzej Wasilewski and wished him further fruitful work. The meeting was attended by Jerzy Lukaszewicz, candidate member of the Politburo and secretary of the party central committee. [Text] [Warsaw Domestic Service in Polish 0200 GMT 23 Sep 78 LD]

CSO: 2600

ROMANIA

CHANGES IN MEMBERSHIP OF NATIONAL ASSEMBLY COMMISSIONS

Bucharest BULETINUL OFICIAL in Romanian Part II No 3, 8 Jul 78 p 8

[Summary of Proceedings of Seventh Session of the Seventh Legislature of the Grand National Assembly, 6 July 1978].

[Excerpts] Recently, some deputies who have been members of permanent commissions of the Grand National Assembly, have been named members of the government or of diplomatic missions and some positions of members of permanent commissions have become vacant. In order to assure the continued good progress of the activity of the permanent commissions, the Bureau of the Grand National Assembly proposes the following modifications in the composition of some permanent commissions of the Grand National Assembly:

In the Constitutional and Juridical Commission:

--the release from the commission of Comrade Stefan Bobos (member of the commission), since he has been appointed ambassador, and of Comrade Richard Winter (member of the commission), since he has been appointed minister state secretary;

--the election of comrade deputies Olga Borda, Ernest Breitenstein, and Gheorghe Lupea as members of the commission.

In the Commission for Agriculture, Silviculture and Water Management:

--the release from the commission of Comrade Aldea Militaru (member of the commission), since he has been appointed ambassador, and of Comrade Marin Vasile (chairman of the commission), since he has been elected secretary of the RCP Central Committee and chairman of the National Union of Agricultural Production Cooperatives and member of the government;

--the election of comrade deputies Maxim Berghianu, Mihai Petla and Ion Rusinaru as members of the commission.

In the Commission for Peoples Councils and State Administration:

--the release from the commission of Comrade Corneliu Onescu (secretary), since he has been appointed minister state secretary, and of Comrade Virgil Trofin (member of the commission), since he has been appointed minister;

--the election of comrade deputies Vasile Potop and Alexandru Toana as members of the commission.

CSO: 2700

ROMANIA

ITALIAN TRADE UNION OFFICIAL COMMENTS ON ROMANIAN FOREIGN POLICY

Bucharest AGERPRES in English 0950 GMT 5 Oct 78 AU

[Text] Bucharest, 5 Oct, AGERPRES--I have had the opportunity to see how socialism is being built in Romania, not after an abstract pattern, but linked to the country's specific realities, a socialism permanently debated and verified in the dialogue with the working people, with the wish for continually improving it--stated Giorgio Benvenuto, secretary general of the Italian Union of Labour [UIL], who has recently visited Romania at head of a delegation of that TU organization.

In an interview given for the Romanian "LUMEA" weekly he said: We are particularly interested in the policy Romania promotes, a policy independent in all aspects, as well as in the original way in which socialism is being built in Romania. It is of great interest to us, the Italians, we are very much interested in the way which the working people assert themselves in running the enterprises, this process being a problem of special concern to us in Western Europe. During our Romanian visit, we have had the opportunity to thoroughly analyze the stand of the Romanian TU movement on various problems, we could get better acquainted with the actions and ideas of President Nicolae Ceausescu. This also facilitates us a useful debate on analyzing our own experience.

During this visit--he further said--we have become acquainted with the specific character of the Romanian realities, with the wise and intelligent way in which Romania promotes its relations in the service of peace, with the steady effort of the Romanian state for consolidating the unity of the socialist countries.

We also appreciate the way in which the economic policy is approached in Romania towards consolidating the independence of the Romanian economy. We are appreciative of the way in which it develops trade relations with Western countries as well--for instance the collaboration with Italy--and relations with the countries of the Third World.

Romania plays a significant role in international relations, it has demonstrated that it can promote an international policy of large audience. I

am an admirer of the Romanian foreign policy, a policy characterized by courage, serving peace indeed.

In another sequence of ideas, the UIL secretary general stated: We consider that the state of affairs of the "cold war" period must be surpassed. We are of the opinion that it is necessary for bilateral relations to develop between TU organizations of various countries of the world. In this context, we wish to strengthen the relations with TU organizations of Romania, facilitating thus the attainment of a strategy conductive to seeking out fields of common activity.

CSO: 2020

## ROMANIA

### ROMANIAN AIRCRAFT IAR-824 DESCRIBED

Prague ATOM in Czech No 9, 1978 p 29

[Text] During the past few years, the aircraft industry of the Socialist Republic of Romania has considerably expanded its production capacity. Together with the growing production, the activity of the aircraft designers is also on the rise. One of them, professor Iosif Silimon worked out a project of a multipurpose aircraft IS-24 the prototype of which, IAR-824, was built in 1971. IAR-824 is one-engine, all metal, high-wing aircraft with a rigid three wheel landing gear. A roomy six-seat cabin is accessible through two doors on the left side of the fuselage. The cabin can easily be adopted for transportation as well as medical purposes, parachute drop training or areal photography and can even be used to tow a glider. In the medical version it can be used to transport two casualties on stretchers and a doctor; the air-drop version has a one member crew and carries four paratroops; the transport version allows moving loads of up to 500 kilograms. Because of its versatility, the aircraft has all the prerequisites to be used as a military vehicle. The aircraft is powered by a Lycoming IO-540-G1C 5 cylinder engine with an output of 213 kW and has a two blade adjustable pitch propeller.

Basic tactical-technical data:

Dimensions:

Wing span.....12.40 meters

Length..... 9.10 m

Height..... 3.30 m

Wing area.....23.60 meters square

Weights

Empty (operational?)...1,240 kilograms

Weight

Overall (takeoff?)....1,900 kilograms

Performance

Speed-maximum.....220 kilometers per hour  $^{-1}$

Minimum..... 82 km/h $^{-1}$

Rate of climb..... 4 (meters per second?)  $^{-1}$

Maximum altitude..... 4,500 meters

Maximum range..... 900 kilometers

Length: take-off runway 240 meters

landing runway 140 meters

CSO: 2400

ROMANIA

BRIEFS

NEW DEPUTY MINISTER--The President of the Socialist Republic of Romania decrees that Comrade Ludovic Paun is appointed deputy minister of health. [Bucharest BULETINUL OFICIAL in Romanian Part I No 85, 25 Sep 78 p 4]

NEW COUNTY OFFICIALS--Inasmuch as the positions of chairmen of the executive committees of the peoples councils of Alba and Vilcea counties have become vacant, on the basis of Article 72 of Law No 57/1968 on the organization and operation of the peoples councils, the President of the Socialist Republic of Romania decrees that Comrade Nicolae Hurbean is delegated to fill the position of chairman of the executive committee of the people's council of Alba County and Comrade Teodor Coman is delegated to fill the position of chairman of the executive committee of the peoples council of Vilcea County. [Bucharest BULETINUL OFICIAL in Romanian Part I No 86, 26 Sep 78 p 4]

CSO: 2700

YUGOSLAVIA

MINERAL RESERVES EXAMINED FROM DEFENSE STANDPOINT

Belgrade TEHNIKA in Serbo-Croatian No 5, 1978 pp 730-737

[Article by Prof Dr Dejan Milovanovic, Engineer, of the Mining and Geology Faculty in Belgrade, and Dr Petar Radicevic, Engineer, of the Association of Engineers and Technologists, Belgrade]

[Text] I. Introduction

1. The development of productive strengths in human society is constantly accompanied by the development and perfection of the production of the most varied weapons and equipment. In the past 100 years this production has grown into an independent military (war) industry, and in most recent times one can justifiably speak of a military technical revolution of world-wide scope. Enormous financial resources are spent in the world to modernize existing systems and create new systems of weaponry that are even stronger, while in the capitalist countries there is clearly a growing militarization of the economy with all the consequences that are brought by such a process and orientation.

We begin from the standpoint that the basis of the goals of general national defense and social self defense in Yugoslavia is provided by the general determination of the socialist self-management society, led by the LCY in the struggle for peace in the world. That society has an independent and particular viewpoint on the role of force and war under modern conditions; it believes that it is the constant task of all working people and citizens of Yugoslavia to provide daily preparation and equipping of the needs of general national defense. In accordance with that, the Yugoslav military industry is constantly developing and being improved, and to a significant degree that is dependent on possession of a large number of mineral raw materials.

According to accepted general criteria and the level of explorations, Yugoslavia has at its disposal an immense and varied mineral raw material base, which represents a significant factor for the development of military industry and is an essential element in the defense capabilities of the country.

2. Mineral raw materials have always represented a basic material factor for successful military operations, since they enabled (or made impossible) the construction of most weapons and weapons systems.<sup>1</sup>

The hastened development of military industry further increased its dependence on large supplies of mineral raw materials. That dependence is of both a quantitative and a qualitative character. In addition, past experience is of significance; it shows that in certain periods particular raw materials emerge as strategic materials of the highest priority, only to yield their place a few years or decades later to other raw materials.

3. In the course of human history, needs for internal supplies of mineral raw materials, as well as control of other natural resources, have caused numerous territorial conquests and wars. In antiquity, in the Middle Ages and at the dawn of the modern era, rapacious military campaigns were organized largely because of rare metals, but it was not uncommon for such war operations to be initiated to gain mines producing copper, tin, lead and iron, since even in the early stages of the development of human society these metals had tremendous importance for fashioning weapons.

Examples of military campaigns organized for and provocation of international conflicts because of mineral raw materials are very numerous. The opinion is found that the rich iron mines of Alsace-Lorraine were several times the cause of clashes between France and Germany. After victory in the Franco-Prussian War, the Germans immediately took over the entire steel industry and shifted the international border to encompass the mine spurs. Not being familiar with the genetic characteristics of deposits, German geologists at that time made the fundamental and fateful error resulting in the fact that despite all the border shifts, the major iron deposits remained on French territory.

In addition to the centuries-long designs on conquering Chinese territory, a major role in the Japanese invasion of China during World War II was played by the mineral wealth of China. The industrial potential of Japan, especially for arms production, demanded new and greater supplies of anthracite, tin, antimony, tungsten, mercury and other raw materials, which were either lacking entirely or insufficient on the Japanese islands.<sup>2</sup>

The colonization of Africa and Asia, as well as of other parts of the world, was in large part directed toward conquest of practically uncalculated mineral wealth. After the Boer War, the English placed under their control diamond and gold mines of great wealth. In conquering the Congo, the Belgians came into possession of deposits of copper, cobalt, uranium and diamonds of world significance. These deposits, as well as lesser known ones and oil reserves, even today constitute the basis for unrest and conflict on African territory, where individual countries or multinational corporations, applying the most modern technology and utilizing the cheapest labor force, wish as long and as quickly as possible to acquire the largest possible supplies of mineral raw materials.

On Yugoslav territory, it is of interest that the Turks, particularly after the battle of Kosovo, were the first to start exploiting mine centers. During World War II, the Germans undertook all possible measures to acquire the largest possible quantities of essential wartime mineral raw materials for pursuing their war efforts from the deposits at Trepce, Bor and elsewhere.

4. The terminology for natural mineral materials that are the basis of military industry is becoming constantly broader and is developing at a rapid pace. In the last 15 years the specific needs of military technology have led to the introduction and widespread use of such mineral ores as titanium, beryllium, lithium, germanium, rubidium, zirconium, niobium, columbium, lanthanides, and borium. In that manner the list of so-called strategic raw materials has grown ever longer.

In modern theory and practice, the question arises as to what the strategic raw materials are, and how this group can be singled out in relation to the overall resources of mineral wealth and their structure. In considering this question, special attention must be devoted to the fact that experience confirms that there are always, in any time period you choose, various weapons being produced and various defense preparations undertaken, which depend on a series of mineral substances that are not regarded as strategic in importance under ordinary circumstances, even though in fact they are. They include sand, gravel, cement, and clay, among other materials.

5. In a more precise classification of mineral raw materials as exceptionally important materials for war industry and related industrial branches, in modern circumstances the division (by D. Milovanovic and R. Radicevic) into strategic and critical mineral raw materials is meaningful.

The criteria in this separation are primarily the degree of essential need for the respective raw materials for the production of war equipment, technology and related products, or the conduct of armed belligerencies,

and the degree to which the country is supplied, or a more or less extensive region is supplied, with these raw materials from domestic sources. This relates to materials that are essential for a state of war. On the basis of these criteria, the general classification emerges of, a., strategic mineral raw materials, divided into sub-categories of primary or priority, and secondary materials; and b., critical mineral raw materials.

The category of strategic mineral raw materials is regarded to denote those mineral raw materials and products of primary processing that represent essential materials for military industry and the successful conduct of armed conflict. Under modern conditions it is practically impossible to carry on either aggressive or general national defensive warfare without them.

Primary (or priority) strategic mineral raw materials, under modern conditions, include a group of raw materials that are rather heterogeneous in their composition. As a whole, however, the group is very flexible, because with the improvement of science and technology, the priority position of particular mineral raw materials for military industry changes.

More closely defined, the mineral raw materials of this group represent the most important ones for war (military) industry and a country's defense capabilities. It includes chiefly uranium, thorium, beryllium, nickel, cobalt, tungsten, molybdenum, chrome, manganese, titanium, vanadium, mercury, antimony, copper, aluminum, germanium, zirconium, the metals of the platinum group, iron (steel), quartz crystals, asbestos, columbium, tin, bismuth, potassium, diamonds, and oil.

Secondary strategic mineral raw materials include those minerals that are also in a certain degree significant for military industry and a country's defense capabilities. Here are included practically all the resources that were not included on the previous list, for as stated previously, today the military industrial complex produces on the basis of an enormous number of mineral raw materials, such as for example sulphur, kaolin, various clays, barite, gypsum, etc.

The category of critical mineral raw materials includes in general those minerals which the given country, or more or less extensive territorial region, is completely or partially lacking. In the first instance, there are practically no conditions for producing the critical raw material (either economically or geologically) in a given country or region. In the second case, the metal genetic prerequisites for economically interesting exploitation of a given raw material are present, but the level of exploration is low or else it is unsatisfactory. On the other hand, economic factors may make it impossible to bring a discovered deposit into exploitation.

Critical mineral raw materials also comprise a flexible category and depend, among other things, on the constant progress of science, technology, and technical applications.

6. Deposits of raw materials are distributed unevenly in the earth's crust and thereby in regional dimensions as well. That affects the fact that under present conditions, as it has happened throughout human history, a major portion of primary strategic raw materials are being exploited in only a few countries, or in restricted regions, which territorially lag markedly behind the remaining portion of the earth's surface.

Concerning most of these strategically critical raw materials, it is typical that most of the countries with highly developed military industrial complexes (the United States, West Germany, Japan, England, France and others) do not have domestic supplies of these raw materials, or else they are able to satisfy only a portion of their most urgent needs. Thus, for example, the United States imports all necessary quantities of manganese, chrome, cobalt, tin, columbium, and rare metals, while for a number of other raw materials (asbestos, nickel, graphite, antimony, the platinum group, lisconium, and beryllium), domestic sources can provide only about 20 percent of the demand. A markedly worse situation obtains in the other capitalist countries, with the exception of Australia.

Among the socialist countries, practically speaking only the USSR, due to its immense territory and multifarious metal genetic characteristics, is well supplied with almost all strategic raw materials. The People's Republic of China has domestic supplies of numerous raw materials, while the other socialist countries (except Yugoslavia) have various degrees of local sources for strategic raw materials.

Yugoslavia possesses significant reserve concentrations of many mineral raw materials, and potential deposits according to realistic and generally accepted criteria are regarded as favorable. Thus the country has an available basis of mineral wealth that in quantity and quality can increase and improve.

7. The deficit in necessary mineral raw materials can be compensated for by imports during peacetime conditions. Even those raw materials that the importing country has in some quantities are imported, so that domestic reserves can be retained for the near or distant future (conservation of mineral deposits in the narrow sense). In this policy, even certain official and political positions are sometimes ignored (as in violating the embargo on chrome ore from Rhodesia), just to satisfy the economic demands of the capitalists.

The complex political situation in the world, however, which emerged right after the end of World War II and has continued since without interruption, has caused the administrations of some capitalist countries, primarily the United States, to develop long-term policies to assure necessary strategic mineral raw materials. Within the framework of those policies, the prime place belongs to the stockpiling of mineral raw materials within the United States. (The statement on the need to stockpile mineral raw materials necessary for wartime needs was actually expressed for the first time in the United States on the eve of World War II.) Such strategic stockpiles probably also exist in the USSR, the People's Republic of China, and in certain other countries.

In connection with the policy of creating and maintaining strategic reserves of mineral raw materials in the United States, it should be stressed that in the postwar period this policy has undergone significant changes that have resulted in the increasing or reduction of quantities of individual materials in stockpiles, as well as in certain changes in the quality of the materials stockpiled, or in reduction or increase in the number of types of mineral raw materials and primary processing products from them. The most recent changes come from the last quarter of 1976, when the Federal Preparedness Agency (FPA) in the US General Services Administration presented a new list of strategic raw materials showing new quantities; in the main these were raw materials that were being increased from the maximum limits that had previously been set. The stockpiles include 93 mineral, metals, and other materials based on mineral raw materials which would be essential for supplying military and fundamental civilian needs during the course of a conflict of broad dimensions, or when acquisition from normal foreign sources was rendered impossible. The stockpiles were planned to suffice for the satisfaction of needs for a period of 3 years of extraordinary circumstances. The costs for the new stockpiles were anticipated to amount to between 6 and 6.5 billion dollars, and despite the fact that the President of the United States accepted the proposed stockpiling on the basis of the advice of the National Security Council, final approval was required by the proper representative bodies.

Among other things, the new stockpiles were to include 20,130 tons of antimony, 26,291 tons of amosite asbestos, 734,000 tons of chromite (for the chemical industry), 2,255,000 tons of chromite for metallurgical needs, 642,000 tons of chromite for ferrous industry, 2,052,000 tons of manganese ore for metallurgy, 247,136 tons of manganese ore for the chemical industry, 2,083,000 long tons of refractory bauxite, 1,594,000 tons of fluorite for the chemical industry, (and 1,914,000 tons for metallurgy), 173,928 tons of rutile, 418 tons of thorium oxide in thorium nitrate, as well as large quantities of copper, aluminum, lead, zinc, tin, graphite, lisconium, and diamonds.

In connection with strategic stockpiles of mineral raw materials, it is necessary to stress especially that their creation has many manifestations for economic and in general the development of countries in worldwide dimensions, as well as an impact on the economic trends of individual countries and regions. Practically speaking one can cite negative and positive factors in stockpiling policies, wherein the negative factor is predominant due to numerous unfavorable consequences of economic, political and financial factors.

The stockpiling of mineral raw materials in Yugoslav circumstances is a problem that requires special studies and analyses.

## II. Basic Features of Yugoslavia's Mineral Raw Material Base

1. The exploitation of various types of mineral raw materials in Yugoslavia has a long tradition that, with interruptions, has lasted several thousand years. This is a consequence of the fact that on Yugoslav territory there is a concentration of assorted rich mineral deposits, which has always been attractive not only for the Yugoslav peoples, but for people from many countries.

Production of mineral raw materials began on Yugoslav territory several millenia ago (in ancient mining operations), and continued in the antique age in the obtaining of gold, silver, lead, mercury, etc. In the Middle Ages these operations reached their zenith, acquiring world significance according to the criteria of those days (at places such as Novo Brdo). The stagnation resulting from the Turkish occupation, as well as other factors, lasted in practical terms until the second half of the 19th century. Since then a new advance in Yugoslav mining has been underway, lasting unabated until the beginning of World War II.

Between the two wars, most of the mineral raw material deposits were plundered, and the raw materials exported in large quantities almost exclusively as ore (the colonial policy of foreign countries). Foreigners had complete control of most of the deposits that interested them, for ores from Yugoslav deposits had an important role in the development of the Fascist German war industry during the prewar period, since Germany was lacking many raw materials that were found in significant quantities in Yugoslavia (such as bauxite, antimony, etc.).

Even more blatant plundering of Yugoslavia's mineral wealth took place during the wartime occupation. Drastic examples are the robbing of the rich ores of Bor, Trepca and Zajaca, and in bauxite deposits, where even at the cost of human lives the mining and protective tunnels and platforms of mining operations were pushed forward, so that the occupation forces

could be certain of the greatest possible quantities of essential raw materials for their war industries. The Germans and Italians almost totally ignored explorations and mercilessly extracted known reserves. Immediately after the end of the war, that sort of policy had many domestic mines in a difficult situation regarding the provisions of a raw material basis for operations.

In the mining centers, under prewar and wartime conditions, in which the workers lived and worked under circumstances of slavery, a working class and a revolutionary labor movement was spawned and grew. Therefore, the mines and smelters were often the targets of attacks and diversions by the national liberation movement, practically throughout the course of World War II, despite the lengths the enemy went to to defend them. Well known operations took place at Trepca, in the formation of actions of the "Mining Company" of partisans, in the attacks on the gold placer at Peko, and in several coal mines; these as a rule were very successful and led to either lengthy or permanent interruptions of mining operations. In essence that meant that the enemy received less of the mineral raw materials he valued so highly, and consequently, that he could produce less munitions, tanks, cannons, and aircraft, those most important weapons for sewing death at that time in the many battlefronts of Europe and elsewhere.

Immediately after the victory of the popular revolution in Yugoslavia, the formation and establishment of new socioeconomic relationships, the creation of the state sector in the economy, the nationalization of major private industries, the concentration and regulation by plan of industrial production, and the formulation of a new economic policy (since industrialization was unthinkable without accelerated development of mineral raw material production from domestic reserves); -- all these helped to create fundamentally new conditions for planned, more organized, and more comprehensive exploration, and more intensive and rational exploitation of available mineral reserves. In keeping with the introduction and development of workers self-management, general economic decentralization, and a consistent policy of non-alignment, these conditions have improved even more and continue to improve.

The present level of Yugoslavia's socioeconomic development dates from adoption of the New Constitution, and the 10th LCY Congress (since the Resolution of the 10th LCY Congress states: "The central production emphasis and developmental policy in the present period must be on the production of energy, raw materials and food. Such production has extraordinary significance for establishing economic stability, overcoming the balance of payments deficit with foreign countries, coordinating the economic structure, and promoting dynamic and stable economic development.") The republic congresses that followed, and the promulgation of the Law On Associated Labor, combine to give special stress to the further development and utilization of domestic mineral raw materials without which the

realization of the significant tasks ahead in the coming years cannot even be imagined. In that context, mineral raw materials from domestic reserves, especially those that are of primary strategic importance, should play an even greater role in the development of Yugoslav military industry and in raising the defensive capabilities of the country to an even higher level. With all this, the mineral raw material base should be sufficiently explored and prepared so that in extraordinary circumstances, those reserves that currently are not being exploited, but that contain very valuable potential raw materials for the specific circumstances of a defensive war, could be quickly and effectively activated.

3. Yugoslavia contains a significant raw material base for numerous metallic, nonmetallic and energy raw materials. In the period since World War II, despite certain limitations on resources for exploration, a vast raw material base has been created for many ores (including lead, zinc, copper, bauxites, iron, natural gas and crude oil, lignite, magnezites, mercury, clays, quartz ores, etc.). New economic types of deposits have been uncovered (such as porphyry as a copper by-product, sedimentary types with magnezites, and polymetallic types with antimony). New coal deposits have been discovered and explored, as well as new genetic metal units, and deposits have identified for many mineral ores that were practically unknown to exist in economically viable amounts before World War II (such as tungsten, tin, uranium, nickel, and volastonite). The Yugoslav mineral raw material base has enabled a marked increase in production compared to the prewar period. Production figures for 1976 show the following quantities of the major raw materials for all of Yugoslavia: 36,845,000 tons of all types of coal (of which 685,000 tons were anthracite, 9,110,000 tons brown coal, and 27,149,000 tons lignite); 3,880,000 tons of crude oil, 1,730 million cubic meters of natural gas, 4,260,000 tons of iron ore, 17,377,000 tons of copper ore (of which 121,587 tons was electrolytic copper from fresh ores), 3,806,000 tons of lead-zinc ores (yielding 111,220 tons of refined lead and 95,469 tons of zinc); 2,033,000 tons of bauxite (yielding 197,679 tons of aluminum ingots), 71,000 tons of antimony ore (yielding 2,332 tons of antimony regulus), 144 tons of refined silver, 78 tons of bizmuth, 12,830 tons of asbestos fiber, 391,000 tons of magnezite ore, and 7,633,000 tons of cement.

Compared to the prewar period, the greatest production growth has come in oil, natural gas, aluminum, silver, copper, lead, zinc, magnezite, iron ore and cement.

4. Yugoslavia is significant not only in Europe but in the world as a producer of numerous mineral raw materials. In world production of typical metals, in recent years the Yugoslav share has been about 2 percent of antimony (metal in ore), about 5 percent of antimony regulus, about 6 percent of mercury, 0.8 percent of cadmium, 1.4 percent of silver, about 2 percent of bizmuth, about 3 percent of selenium, 1 percent of copper (metal

in ore), 3 percent of bauxite, 3.5 percent of lead (metal in ore), and 2 percent of zinc (metal in ore), -- all figures are approximate. Yugoslavia is also an important world producer of magnesite, feldspar, barite and some other non-metals.

5. The most important features of the fundamental mineral raw material in Yugoslavia are as follows:

5.1. Energy resources. In Yugoslav energy resources, the largest share falls to coal, amounting to 84.2 percent, particularly low BTU lignite (69.7 percent); crude oil and natural gas amount to 6.5 percent, and hydroelectric potential, 0.1 percent (on the basis of annual use of  $63.7 \times 10^9$  KWH); nuclear fuels and bituminous shale amount to some 9 percent. (Data from M. Simonovic and S. Boskovic, "The Economic Aspects of Utilization of Energy Resources in Serbia," in the journal EKONOMIKA UDRUZENOG RADA (The Economics of Associated Labor), 1977, No 7-8, pp 465-471).

Coal is the most stable Yugoslav source for obtaining primary energy and it forms the basis for the development of domestic energy. Available coal reserves, chiefly lignite, make possible production of about 230 million tons annually. About 90 percent of these reserves are found in 10 large basins, but a large number of smaller deposits have been discovered and partially explored, although they have not yet been brought into production. This fact is certainly of strategic significance.

Available reserves of crude oil and gas are not sufficient to satisfy domestic needs, so that increasing amounts of these raw materials are being imported. In 1976, for instance, 8,296,000 tons of crude oil were imported. The level of exploration of Yugoslav territory is, however, still very low, and experts consider that "the foundation for further serious expansion of oil and gas production continues to be the Pannonian area and the Adriatic." (The Resolution from the consultation and conference on potential mineral raw materials and the possibilities of their use as a factor in the long-range development of Yugoslavia, Split, 1975). The possibilities of discoveries in other regions are not excluded, of course.

The level of exploration in Yugoslavia for uranium and other nuclear fuels is low. The only detailed exploration has been conducted at Zirovski vrh in Slovenia, and that region is being prepared for exploitation. According to published data, the known reserves of  $U_3O_8$  are 13,000 tons, enabling longterm production, but since the potential extent is greater, more intensive geological explorations are needed.

Bituminous shales are regarded as a very important potential energy source, despite the present low level of explorations. They deserve general public attention.

5.2. Metallic mineral raw materials. In the power period, a solid raw material base has been developed in Yugoslavia for iron, lead, zinc, bauxite, mercury, and nickel. The reserves of these raw materials can increase even more, since their potential is great. Certain problems exist in connection with declining quality (in the concentration of usable components in the ores being exploited), and the general geological prospects are worsening. Nevertheless, that is a normal occurrence that is found practically throughout the world, and which must be accommodated.

Of particular significance is the fact that the Yugoslav iron ore base has been increased markedly (in the last 10-odd years), thanks to the very good results of the explorations in the Ljubija region. This will permit production of about 16 million tons of concentrate annually, as well as notably greater production of steel than heretofore. This is very significant, since steel is one of the most important strategic materials. Among other metals, it should be mentioned that Yugoslavia produces chrome (in minimal quantities in the last few years), manganese (with a large raw material deposit but poor quality, so that domestic demand is filled largely by imports), along with silver, selenium, cadmium, bismuth, and gold. Nickel production is in preparation, while production of tungsten was halted in 1964 and that of molybdenum, immediately after the war. There are interesting, but insufficiently explored, deposits of tin, titanium, and rare and scattered metals.

As a whole, very positive conditions exist for further expansion of the metal raw material base and for improving both quality and the ratio of new raw materials used, especially those of strategic importance.

5.3. Non-Metallic Mineral Raw Materials. Yugoslavia possesses significant reserves of a number of non-metallic raw materials, including primarily asbestos, barites, quartz sands, magnesites, feldspars, refractory substances, ceramics, benton clay, as well as volastonite, volcanic lava deposits, dolomites, and cement raw materials. The raw material reserves of non-metallic substances are not, however, sufficiently explored or sufficiently activated or utilized. Consequently these problems must receive attention, as clearly formulated and planned in the Social Plan for 1976-1980.

### III. Yugoslav Mineral Raw Materials That are of Primary Strategic Importance

1. A complete study of the mineral raw materials base of Yugoslavia in terms of strategic materials, particularly priority raw materials, has not yet been prepared. Therefore, until now the strategic importance of mineral raw materials has generally been regarded in separate categories from the aspect of individual or grouped materials, lacking the element of comprehensive and interrelated study of definite types and classes of raw materials.

2. Among the classic strategic raw materials, such as copper, lead, zinc, antimony, iron ore, aluminum (bauxite), Yugoslavia possesses a satisfactory raw material base that can be markedly expanded with intensification of geological exploration. The situation is much more complex regarding alloying metals, whose importance in the strategic, military sense is growing.

In the production of chrome and the raw material base for such production, Yugoslavia for a long time has led Europe and held an important position in world production. The raw material base, however, is nearly depleted and today most of the needed chrome ore is imported. There are favorable indications for the discovery of new chrome deposits, but major funding is required for an extended time period.

The raw material reserves of manganese are relatively large, but the quality is low, so that a large part of needs are imported. More intensive exploration, as well as technological testing, is necessary, for the available raw material base.

Nickel reserves are relatively large and the explorations of recent years show the possibility of further expansion of the raw material base. In the near future, it is anticipated that exploitation will begin in the explored deposits in Macedonia (at Rzanovo) and Kosovo (at Goles). Along with the nickel, there is a possibility of cobalt production.

Regarding molybdenum, it is characteristic that Yugoslavia has a single deposit of this ore, in Macedonia at Surdulica, but that the metal content in the ore is insufficient to assure advantageous production under present conditions. Selective exploitation of a smaller part of the deposits seems possible in case of extraordinary needs.

Tungsten production was halted in 1964. It is considered that conditions would permit reactivation of the deposit at Blagojev kamen, since it contains interesting amounts of gold. The exploration level of this raw material is low. There seems to be interesting territories for discovering deposits that would be economically of interest in Macedonia and eastern Serbia.

Until recently, Titanium has received little attention, even though there are data that indicate the existence of significant concentrations of ilijemite and rutile in certain parts of Yugoslavia (chiefly in Macedonia).<sup>3</sup>

Tin has never been exploited in Yugoslavia heretofore. In modern times, in western Serbia and Sumadija, significant dispersed but primary deposits of kasiterite and niobium and tantalum have been found. Explorations are still in progress, but deposits in western Serbia seem able to provide small production. There are also other potential tin deposits in Yugoslavia.

Yugoslavia has no production of metallic megnezite, but there are ores from which it could be extracted (dolomites, magnezites, and sea water). There are prospects that very soon production of this valuable metal could begin, since construction of a plant is under way in Serbia (using dolomite).

3. The situation with rare and scattered elements in Yugoslavia is quite definite. There are good conditions for bringing more of these elements into production. (Today selenium, cadmium, bismuth and indium are produced). Production can be begun of germanium, gallium, talium, rhenium, niobium and tantalum. At present there is an obvious slowness in achieving the actual possibilities offered by the raw material base and potential. It is interesting that explorations of rare and scattered metals has never been systematic and continuous until now, and that the overall prospects are favorable.

It should also be stressed that sufficient attention has not been devoted to beryllium, zirconium and vanadium, even though numerous outcroppings of these raw materials exist on domestic territory.<sup>4</sup>

4. Among the non-metallic raw materials special stress in connection to their strategic importance should be placed on fluorite, boron, quartz crystals (piezo-optical quartz), lisenium, and asbestos. A high level of exploration exists only for asbestos. For many years fluorites have been sought in western Serbia, and the results are satisfactory. Very little attention has been paid, however, to boron ores and to quartz crystals, even though prospects for their discovery seem favorable. The situation is the same with lisenium ores, which can appear primarily as a by-product of mining pegmatitic feldspar ores.

5. Nuclear ores have not been explored sufficiently. It has been determined that there are several hundred outcroppings of uranium and some thorium, and other ores can be significant in this where they contain uranium as a component (as in coals and phosphates).

IV. The Tasks of Engineers and Technologists (Geologists, Mining Engineers and Metallurgists) in the Area of General National Defense.

Engineers and technologists whose responsibilities are most closely connected with exploration, exploitation, and preparation of mineral raw materials have numerous, complex, and responsible tasks and obligations in the area of general national defense and social self-defense, which are to be accomplished within the framework of their organizations of associated labor, in local communities, self-management interested communities, and various other delegative structures. Being socially organized into the most varying forms of engineering and technological organizations, they have a special role in training personnel and preparing the society as a whole for defense and for the defensive capability of the country.

The specific nature of the calling generates specific rights and obligations:

1. In the sphere of discovery, exploration and evaluation of mineral raw materials, engineers and technologists must strive for the most objective evaluation of explored and prospective mineral raw material bases in Yugoslavia, with particular stress on the comprehensive examination of the total picture of strategic priority raw materials and their structure. In the framework of that structure, they must clearly separate those raw materials that can be obtained from domestic sources and those whose supply must permanently or for a lengthy period, be tied to imports.

In their organizations of associated labor and delegate forums, they must struggle to see that, in accordance with the socioeconomic and political system of Yugoslavia, the needed resources are available for continuing exploration of mineral raw materials, thus assuring a high level of explorations on Yugoslav terrain and the transformation of prospective or predicted reserves into actual proven reserves as a clearly defined geological and economic category, thereby assuring a higher degree of defense capability and economic stability for the country.

More than heretofore, in selecting priorities for exploration, engineers and technologists must concentrate on raw materials that have strategic importance, while not giving sole weight to economic considerations. Rather, they should take extraordinary conditions and the interests of defense into consideration.

During the process of exploring outcroppings and deposits of mineral raw materials, and particularly when forming conclusions based on natural and value parameters by geological and economic analysis, more attention should be paid to all elements that are of significance from the aspects of defense and strategy (such as the possibility of rapid initiation of production in case of an extraordinary situation, the importance of the ore as an eventual substitute for imported raw materials where such imports would be halted by wartime conditions, and conditions for supplying the necessary energy for exploiting and processing raw materials, and available labor forces and their qualifications).

These tasks can be accomplished individually and through all forms of operations of engineer and technologist organizations.

2. In the area of exploitation, preparation and primary processing of mineral raw materials, beginning from the tasks of general national defense and the defense capabilities of the country, engineers and technologists must exert special efforts to assure in the process of exploitation that those methods are applied which guarantee in the extraction of ores the maximal degree of utilization of usable substances, the maximal loss reduction, and amelioration that will prevent constant losses of significant quantities of mineral raw materials.

They must assure that the exploitation of mineral raw materials causes the minimum threat to the human environment.

They must as soon as possible undertake the preparation of exploitational plans for specific deposits of strategic mineral raw materialism and, if under present conditions those deposits are not feasible for economic exploitation, determine if they would represent an important source of necessary raw materials in the circumstances of an extraordinary situation or wartime.

New methods of exploitation must be prepared and brought into operation, especially the so-called technological methods (which have provided noteworthy results in many countries, particularly in the extraction of uranium, copper, molybdenum, and various salts, and which are under study for extraction of iron, manganese, mercury and phosphates; in Yugoslav conditions they offer good prospects for nickel, molybdenum, and potentially copper and manganese).

Scientific research must be intensified in the area of perfecting existing and discovering new methods and procedures for preparing strategically important raw materials.

In the phase of processing more complex mineral raw materials, more comprehensive treatment procedures must be developed, thus assuring the production of more rare and scattered metals, of which many have expressly strategic significance (as do germanium, gallium, indium, thalium, etc.).

Substitution must be introduced of various cheaper or more readily available mineral raw materials or synthetic products for more expensive ones, thus reducing the dependence on foreign sources, and activating the domestic raw material base.

Therefore, it is necessary to carry out the following steps:

1. As soon as possible, to prepare a detailed study and balance of priority strategic raw materials of a mineral nature in Yugoslavia.
2. To form a joint study group that would be composed of specialists from the League of Engineers and Technologists of Yugoslavia, and the Yugoslav National Army, to concern itself on a permanent basis with all important matters concerning strategic mineral raw materials and their connection to general national defense and self defense.
3. By pooling the resources of the Yugoslav National Army and suitable organizations of associated labor, or self-management interest communities for geological explorations, to assure financial resources for more intensive and comprehensive exploration and testing of strategic mineral raw material deposits on domestic territory.

4. Within the framework of the League of Engineers and Technologists of the mining, geological and metallurgical professions and their specialist committees, to work out in detail the remaining tasks and obligations of engineers and technologists concerning the relationships between mineral raw materials and general national defense.

#### FOOTNOTES

1. In World War I the consumption of technical war materials expanded rapidly. The major powers in that war produced more than 180,000 aircraft, 150,000 artillery pieces, more than a million machine guns, a billion artillery shells and about 35 billion rifle bullets.

Tanks first appeared on the front in 1916, but by the end of the war the Entente states had already produced more than 9,000. During World War II, the needs of many millions of soldiers grew even more, and the industries of the countries participating in the war provided their troops with markedly more war machines and materials. In the period 1941-1944 the major belligerents reached average annual production of about 130,000 aircraft, more than 90,000 tanks, about 350,000 artillery pieces of all types, 160,000 mortars, and about 1.7 million machine guns.

2. Japanese industrial production held a totally insignificant share of world production and was completely insufficient to assure Japanese needs for building mighty armed forces and establishing its power in Asia and the Pacific. From domestic sources Japan could supply only a small part of its needs for the most important strategic raw materials; its bauxite, molybdenum, tungsten, coal and coking coal reserves were zero; of oil, nickel and mercury, 4-6 percent; of iron ore, lead and potassium salts, 10-20 percent; of manganese, zinc, tin, and table salt, 25-35 percent; of coal for heating, chrome and copper, 60-80 percent; and of sulphur, iodine, and bromine, 90 percent.
3. Titanium alloys are often used in the production of fast submarines (for the anticorrosive property of the metal, great hardness and lesser specific gravity compared to steel alloys), for fighter planes (according to the statement of former President Johnson, the A-11 aircraft reached a speed of 3,200 km/hour thanks to successful utilization of processed titanium), and for rockets and armored weapons. Aircraft producers consider that in the near future, titanium will in large part replace aluminum in the production of aircraft, and that it will become the basic construction material.

4. Beryllium has been shown to be an excellent material in the production of rockets, aircraft, and various cosmic and other equipment. (In the United States 70 percent of production goes for aircraft, rockets and astraonautic needs, and 20 percent for nuclear energy.) Without vanadium, the production of the American fighter airplanes F-15, F-16, and F-18 would not be possible, nor would the newest versions of battle helicopters be built. The basic alloy for this application has the formula of 90%/4/Ti/Al/V. Zirconium is also finding increasing applications in military industry.

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